

NEEDS OF FAMILY MEMBERS OF
ADULT MAJOR SURGERY PATIENTS

BY

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This descriptive survey study was designed to describe the needs of family members of major surgery patients during the patient's post-operative hospitalization on a general surgical unit. The study investigated the importance of needs to family members and the extent to which family members felt their needs were met. Factors that might influence the importance of needs such as age of the patient, age and gender of the family member, and relationship of the family member to the patient were also investigated. The study was conceptualized within the framework of the University of British Columbia Model for Nursing (Campbell, 1987) and the nine basic human needs of the model were used as a framework to categorize the family members' needs.

A convenience sample of 80 adult family members of 68 adult major surgery patients hospitalized post-operatively on non-intensive care units completed the Major Surgery Family Needs Inventory (MSFNI) and a demographic and health information form. The subjects were approached by the researcher and voluntarily completed the questionnaire after the patient had been hospitalized for at least three days following surgery.

While family members, overall, perceived moderately high to high levels of need importance there was a high degree of variability in overall importance and in the importance of individual items. The family members' most important needs related to: having a feeling of hope; having honest, understandable explanations and timely information about the patient's illness, surgery, treatment and progress; and having information about how to help the patient physically and emotionally in the hospital and after discharge. Only after family members had given priority importance to these needs did they identify as important their own physical, physiological and psychosocial needs.

In general, family members in this study felt that many of their needs were either

partly or fully met. However, some of the needs were not well met, particularly those related to having information about the patient's illness and progress during hospitalization and to having information about how to help the patient physically and emotionally both in the hospital and after discharge.

While no significant difference was found between males and females in the overall importance of needs nor in the importance of any of the nine categories of need, a few individual items were rated significantly different. Males also tended to view the satisfaction of their own needs as generally less important than females. No significant difference was found between spouses and non-spouses in the overall importance of need nor in the importance of most need categories. However, spouses and non-spouses did rate a few individual items significantly different.

A significant positive relationship was found between family member age and the importance of their needs for collection and removal of wastes and for the intake of oxygen. The higher the age of the family member, the more important were these needs. A significant positive relationship was also found between patient age and the importance of the family members' needs for safety and security, for mastery and for respect of self by self and others. The higher the age of the patient, the higher the importance family members attributed to these basic human needs.

The findings of this study were discussed in relation to other research studies, the conceptual framework, and methodological problems inherent in the study. Implications for nursing practice, theory and education and recommendations for future research were identified.

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CHAPTER ONE

Introduction

Background to the Problem

The experience of major surgery represents a significant and stressful event for the patient. However, since any significant event affecting one family member affects all family members (Miller, 1980; Wright & Leahy, 1994), the patient's illness and surgery involves the entire family and significant others in the patient's experiences of pain, suffering and threat to life (Morse & Johnson, 1991). Likewise, the surgical event most likely disrupts family members' usual patterns of behaviour (Breu & Dracup, 1978; Griffin, 1980) with the result that family members may have personal needs that they are unable to meet.

Family members whose needs are unmet may experience feelings of helplessness and anger (Watson & Hickey, 1984), anxiety (Kathol, 1984; Leske, 1993; Silva, 1979) and isolation, timelessness and disruption (Silva, 1977). Anxious family members would most likely convey anxiety to the patient (Frederickson, 1989) and have more difficulty being supportive to the patient or acting as valuable patient care resources (Artinian, 1991). Conversely, family members whose needs are met may communicate less of their own anxiety to the patient (Doerr & Jones, 1979) and are more likely to direct their energies to being more supportive of the patient resulting in a more relaxed patient whose own physical recovery is enhanced (Gaglione, 1984; Raleigh, Lepczyk & Rowley, 1990; Stanik, 1990).

The empirical literature addressing the benefits of planned interventions designed to meet the needs of family members of patients undergoing general surgery is scanty. The results of some studies, however, illustrate that nursing interventions specifically designed to meet family members' needs have positive outcomes for both the family members and the patient. Programs implemented to meet the family members needs for information pre- and

intra-operatively reduced family member anxiety (O'Connell, 1989; Silva, 1978) and improved family members' attitude toward the patient's hospitalization and nursing care (Silva, 1978; Watson & Hickey, 1984). When joint patient-family preoperative instruction was used to meet the information needs of patients and family members, the patients cooperated more readily, required significantly fewer injectable narcotics and spent significantly fewer days in hospital than those patients who did not receive structured joint patient-family preoperative teaching (Dziurbejko & Larkin, 1978). These studies, however, were based on the investigators' assumptions of what were family members' needs and not on empirically identified family members' needs.

Much is known about the needs of family members of the critically ill medical or surgical patient hospitalized in intensive or critical care units (Alpen & Halm, 1992; Hickey, 1990; Kleinpell, 1991; Leske, 1991b). Empirical meta-analysis of data gathered in 27 separate studies utilizing the same data gathering instrument has indicated that the family members of critically ill patients have similar needs and that these needs could be categorized as the needs for support, assurance, proximity to the patient and information (Leske, 1991a; 1991b).

Very little, however, is known about the needs of family members of patients hospitalized for major surgery but not admitted to intensive care units. Only three studies were found that generally identified needs of family members of non-intensive care surgical patients (Bethel, 1981; Carmody, Hickey & Bookbinder, 1991; Silva, 1987). Although the three studies used considerably different instruments, they identified similar family members needs related to reassurance about the quality of patient care, availability of hospital personnel and the provision of understandable information about the patient's surgery and care. The identified needs reflected similar themes to those needs identified in studies of

family members of patients in intensive care units. However, each of these studies had limitations in that they addressed needs of spouses only, had limited sample sizes and/or selected their sample from a population of family members of patients undergoing a limited range of surgical procedures, many of which were not extensive in nature.

In 1988-89, 152,291 surgical procedures were performed on adult in-patients in British Columbia. These surgical procedures, the largest proportion of which were classified as major surgery, represented 47 percent of all adult medical-surgical admissions (British Columbia Ministry of Health, 1988/89).

As a patient's illness is experienced collectively by all family members (Morse & Johnson, 1991), care of the adult surgical patient must include assisting the family members to meet their needs. Family members of surgical patients are most likely anxious and convey their anxiety to the patient (Frederickson, 1989; Kathol, 1984). However, when family members' needs are met, they may be less anxious, convey less anxiety to the patient and be better able to support the surgical patient (Gaglione, 1984). Research has shown that patients who are supported by family members may experience better postoperative outcomes (Chatham, 1978; Dziurbejko & Larkin, 1978; Silva, 1979). Nurses must be aware of the important concerns and personal needs of the family members of surgical patients in order that they may effectively intervene to assist family members in meeting their needs.

Problem Statement

Although research has identified the needs of family members of patients hospitalized in intensive care areas, the important needs of family members of surgical patients hospitalized in non-intensive care units, and the extent to which the needs are being met, have not been empirically verified.

Purpose

The purpose of this study was to describe the needs of family members of patients hospitalized for major surgery in non-intensive care units, to determine the importance of the identified needs to the family members and to determine to what extent the family members felt that their needs were met.

Research Questions

The specific research questions investigated in this study were:

1. What is the importance of the needs identified by family members of patients hospitalized for major surgery in non-intensive care units?
2. To what extent are the needs identified by family members being met?
3. What is the relationship between the age of patient and age of respondent and the importance of the needs identified?
4. What is the difference in importance of needs between males and females and between spouses and non-spouses?

Definition of Terms

For the purposes of this study the following definitions were used:

Basic human need: a fundamental requirement for the survival and growth of the behavioural system (Campbell, 1987). This definition was operationalized with the use of the Major Surgery Family Needs Inventory (MSFNI) (Appendix A), a slightly modified version of the Critical Care Family Needs Inventory (Molter & Leske, 1983) with further questions added.

Importance: the significance of a need as perceived by a family member and rated by the family member on a four point Likert-type scale ranging from 1 (need not important) to 4 (need very important).

Extent: the degree to which a need was perceived to be met as rated by the family member on a three point Likert-type scale ranging from 1 (need not met) to 3 (need met).

Family member: an adult (18 years or older) who visited a major surgery patient during the patient's postoperative hospitalization and was related to the patient by blood, marriage, adoption or affinity as a significant other (eg. life partner).

Major surgery patient: an individual (18 years and over) who had undergone an extensive surgical procedure involving incisional intervention during a procedure related to the respiratory system, digestive system (gastrointestinal and biliary tract), urinary system, male and female reproductive system, breasts, musculo-skeletal system and/or peripheral vascular system (arterial and venous), who was not admitted to the critical care unit post-operatively, and who expected to be hospitalized for at least three days post-operatively.

Significance of the Research

The scientific significance of this research is three-fold. Firstly, it will contribute generally to the body of knowledge regarding family members' needs during the illness of one of its members. Secondly, it will contribute specifically to the limited body of knowledge regarding the needs of family members of major surgery patients hospitalized in general surgical, rather than intensive care, units. And thirdly, it will provide for the testing, in a general surgical area, of an instrument originally designed to measure the needs of family members in intensive care areas.

The practical significance of the research is to provide nurses practising in general surgical units with a further understanding of family members' needs. Knowledge of the needs of, and their importance to, the family members of surgical patients will assist nurses in implementing effective interventions to meet those needs. When the family members' personal needs are met, they may be better able to support, and enhance the recovery of, the

patient.

Organization of the Thesis

This thesis is comprised of five chapters. In Chapter One, the background to the problem, problem statement, purpose, research questions, definitions, and significance of the research, have been presented. In Chapter Two, a review of selected literature pertinent to the research problem and the conceptual framework of the study is presented. Chapter Three addresses the research methods including a description of the research design, sampling procedure, data collection instruments and procedures, pilot study, data analysis, assumptions and limitations, and ethics and human rights. Chapter Four presents a description of the sample, the findings and a discussion of the results. The summary, conclusions, implications for nursing practice, and recommendations for future research are presented in Chapter Five.

CHAPTER TWO

Review of the Literature and Conceptual Framework

Introduction

Identifying the needs of family members of hospitalized patients is a research focus that has received increasing attention over the last one and one-half decades. Both quantitative and qualitative methods and a variety of conceptual frameworks and need categories have been used to identify the needs of family members of a variety of patient categories including terminally ill patients, cancer patients, children, and medical-surgical patients hospitalized in intensive care and non-intensive care units.

The purpose of this chapter is twofold. Firstly, an analysis of selected literature pertinent to this study is presented. And secondly, the conceptual framework for this study is provided. The conceptual framework follows the presentation of the literature because the framework emerged from the literature.

Review of the Literature

Introduction

The analysis of the pertinent empirical and theoretical literature is presented in four sections. The first section addresses the literature relating to the effects of the patient's illness, hospitalization and surgery on family members. The second section presents a discussion of the literature on needs, in general, and the assessment of needs. The third section provides an overview of the literature pertaining to the needs of family members of critically ill adult patients in intensive care areas. The final section of the literature review addresses the literature relating to the needs of family members of adult surgical patients hospitalized in non-intensive care areas.

Effects of the Patient's Illness, Hospitalization and Surgery on Family Members

There is a common understanding in the literature that any illness or injury which affects one or more family members may affect other family members and the family, in turn, may affect the course of the patient's illness (Friedman, 1992; Wright & Leahy, 1994). Family members react to the patient's illness and "...often feel helpless, powerless, and stressed" (Friedman, 1992, p. 352).

Morse and Johnson (1991), through analysis of data obtained from five separate grounded theory studies, developed a model which provided a comprehensive conceptualization of the illness experience of both patient and significant others. This model viewed the illness experience as a four-staged process that "...is a shared experience, occurring within reciprocal, dynamic relationships" (p. 327) and that affects both the sick person and his or her significant others. As both patient and significant others progress through the four stages, significant others may become overwhelmed by worry and concern, especially if they sense that the patient is concerned and worried. Significant others may feel a sense of lack of control but also may "...feel that they must 'keep it together', not giving in to their own feelings of being out of control because they feel a sense of responsibility to act for their [sick] family member" (p. 326). Significant others feel obliged to help and are "...vigilant... wait[ing] in the periphery in case they are needed or wanted. They struggle to get information, to understand what is happening, and to learn about the ramifications and outcome of the illness" (p. 327).

Numerous studies have examined and explored the effects of a patient's critical illness on spouses and other family members. As a result of the imposed separation of family members, spouses of critically ill patients have experienced alterations in their normal pattern of daily living, such as: 1) deprivation of their primary social contact and major source of

gratification and self esteem; 2) imposed autonomy and role reversal; 3) altered patterns of sleeping and eating; 4) interruption of their interpersonal reward system; 5) disjuncture of social contacts; and 6) financial instability through loss of income (Breu & Dracup, 1978). Spouses of myocardial infarction patients reported feelings of loneliness, difficulty sleeping, poor appetite, difficulty concentrating and anxiety (Caplin & Sexton, 1988; Keeling, 1988). Cardiac surgery was found to be significantly more stressful for family members than for patients (Gilliss, 1984) resulting in expressions of fear, numbness, fatigue and hardships on the part of family members because of added responsibilities, increased demands on their time and disrupted family life (Artinian, 1989).

The effects of a patient's surgical intervention on family members has also been examined. Male and female spouses of patients undergoing non-critical general surgery, despite significant differences in age and years of schooling, reported similar stressful feelings of isolation, anxiety, timelessness (Silva, 1977, 1978) and disruption of lifestyle, particularly related to eating, sleeping and working routines (Silva, Geary, Manning & Zeccolo, 1984). In fact, spouses reported a higher level of presurgical anxiety than did the patients and indicated that the time period that created the most anxiety was when the patient was in the operating room (Silva, 1977).

The literature on the effects of illness, hospitalization and surgery on family members has revealed some striking similarities between the effects on, and feelings expressed by, family members of critically ill patients in ICU and family members of general surgery patients on surgical units (Artinian, 1989; Caplin & Sexton, 1988; Silva, 1977, 1978). The similarities were even more striking when it was recognized that the major general surgery patients in the reviewed surgical studies had undergone procedures that were not nearly as "major" as those procedures commonly performed on patients hospitalized on general

surgical floors today. Whether the patient was critically ill or not, the family members' normal patterns of living and meeting their own needs were disrupted, at least to some degree.

Needs and Needs Assessment

All humans have needs. In the literature, a need has been variously defined as "a want or requirement" (Allen, 1990), a "condition in which something necessary or desirable is required or wanted" (Roget's II Thesaurus, 1988), or "a requirement of a person, which, if supplied, relieves or diminishes immediate distress or improves his or her immediate sense of adequacy and well-being" (Orlando, 1961, p. 6). The UBC Model for Nursing has defined a basic human need as "a fundamental requirement for survival and growth of the behavioural system" (Campbell, 1987, p. 35). No matter which definition of need was used, the underlying premise in each definition was that a human being has needs that must be gratified if he/she is to survive and grow to his/her full potential.

No research based literature on need frameworks was found. However, the literature revealed that theorists have attempted to conceptualize or list needs in many different ways but have not empirically verified their conceptualizations. Some theorists have attempted to present needs in the form of lists. For example, Henderson (1960), while having identified that all people have common needs that are satisfied by varied patterns of living, appeared to have represented human needs in a list of 14 activities which each individual is motivated to perform which contribute to his or her "...health or its recovery (or to a peaceful death)..." (p. 3).

Other theorists, however, have organized needs into various umbrella-like categories that encompassed all human needs. Maslow (1954) organized human needs into five need categories and ordered these categories in a hierarchy of need levels. He further theorized

that human needs changed and that humans were not motivated to meet the higher level needs until the lower level needs were met. Watson (1985) also identified need categories and organized them into a hierarchy but further pointed out that "...regardless of how human needs are ordered or categorized, they operate interdependently. One need can never be completely separated from another; they operate dynamically as a whole" (p. 108). Both Maslow (1954) and Watson (1985) have apparently assumed that the logical way to approach the discussion of needs is by viewing them as categories of needs. This author supports that view, as only when needs are categorized in umbrella-like categories that encompass all human needs can discussion and empirical analysis of human needs be easily facilitated. However, the arbitrary hierarchical ordering of need categories proposed by both Maslow (1954) and Watson (1985) prohibits the theoretical viewpoint that human needs do not change but are all operative at all times and that an individual may perceive particular needs as being more important, or requiring satisfaction more than other needs, in a given situation. The hierarchical perspective further prohibits the empirical analysis of the importance an individual attributes to given needs at a specific time in his or her life.

Campbell (1987), in the UBC Model for Nursing, recognized the necessity for categorization of needs and also recognized the interdependent nature of multiple and coexisting needs. However, as the UBC Model is based on systems theory, the nine basic human needs have not been arranged in a hierarchy as they have been in both Maslow's (1954) and Watson's (1985) frameworks. This lack of hierarchical arrangement of needs fostered the theoretical perspective that, while all needs are operative at all times, an individual may perceive that particular needs require satisfaction more than other needs at a given period of time.

Table 1 compares the categories of needs proposed by Maslow (1954), Watson (1985)

Table 1

Comparison of Need Categories of Maslow (1954), Watson (1985) and Campbell (1987)

Maslow (1954) ^a	Watson (1985) ^a	Campbell (1987) ^b
Self-actualization	Self-Actualization	Balance between production and utilization of energy
Esteem	Affiliation	Collection/ removal of accumulated wastes
Love/Belongingness	Achievement	Intake of food and fluid; nourishment
Safety	Sexuality	Intake of oxygen
Physiological	Activity	Love, belongingness and dependence
	Ventilation	Mastery
	Elimination	Respect of self by self and others
	Food and Fluid	Safety and security
		Stimulation of the senses

Note: ^aOrganized in a hierarchy; priority from bottom to top. ^bNo hierarchy; listed in alphabetical order.

and Campbell (1987). While the categories explicated by each of the authors appear similar, the greater number of categories in the Watson (1985) and Campbell (1987) frameworks do not fit directly within the fewer categories of the Maslow (1954) framework.

Before nurses can provide services to meet the needs of their clients, they must have a

clear understanding of the needs of the individuals or groups of clients they are serving.

More specifically, a "...nurse can design and implement strategies to assist family members in meeting their needs only [emphasis added] when these needs and their relative importance for family members are accurately assessed (Forrester, Murphy, Price & Monaghan, 1990). Since recognizing a need involves a value judgement (McKillip, 1987) and studies have demonstrated that nurses and family members may differ significantly in their perceptions of family members' needs and their importance (Forrester, Murphy, Price & Monaghan, 1990; O'Neill-Norris & Grove, 1986), it must be the family members who identify their own needs.

While multiple methods of needs assessment have been advocated (McKillip, 1987), and each method has been reported to have its limitations (Knowles, 1980; Polit & Hungler, 1991), a review of the literature revealed that interviews and questionnaires have been the methods most commonly used to identify family member needs. Some studies have been conducted with the use of structured or semi-structured interviews (Artinian, 1989; Caplan & Sexton, 1988; Hampe, 1975; Silva, Geary, Manning & Zeccolo, 1984; Wright & Dyck, 1984). However, by far the largest proportion of family needs studies have been conducted at a descriptive level using needs assessment questionnaires on which subjects have rated the importance of need statements on Likert-type scales (Alpen & Halm, 1992; Hickey, 1990; Leske, 1991a, 1991b).

The next two sections of this literature review will discuss specific studies which have assessed the needs of family members of seriously ill patients hospitalized in both intensive care and non-intensive care units and of family members of general surgery patients.

Needs of Family Members of Seriously Ill Adult Patients

The needs of family members of seriously ill patients hospitalized in either in intensive

care or non-intensive care units have been the focus of many studies over the past two decades. Many authors have recognized the importance of including the family members in the plan of care for the seriously ill patient and of implementing specific strategies to meet the family members' needs. Investigators have also recognized that, in order to implement effective care strategies, family members needs must be empirically identified. The following discussion focuses on the researched-based literature identifying the needs of family members of seriously ill patients.

Hampe (1975) conducted one of the very early family need studies in an attempt to determine if spouses of terminally ill patients hospitalized in general care units could recognize their own needs, to identify the spouses' needs and to determine if the spouses felt their needs had been met. Using a semi-structured interview method, the investigator twice interviewed 27 spouses of terminally ill patients. The investigator found that spouses could identify their own needs and further identified eight different spousal needs. Subjects were not asked to prioritize their needs. However, 25 (93%) of them identified all eight of the needs indicating that all eight needs were important to most subjects. The need to be helpful to the patient was the only need not recognized as a need by at least 26 (96%) of the subjects. In addition, although all needs were identified by most spouses, greater than 45 percent of the spouses expressed that their needs for assurance of the patient's comfort, for acceptance, support and comfort from health professionals, for information about the mate's condition, and for ventilation of emotions were unmet. The majority of subjects perceived that their needs to be with, to be helpful to, and to be informed of the impending death of, the dying person were met. The majority of spouses further revealed that they felt that the nurse's primary responsibility was to the dying person and that they did not have to concern themselves with the needs of the spouses.

Because Hampe's (1975) study was limited to identifying the needs of spouses of patients dying with longstanding terminal illnesses in one geographical area, the results are not generalizable to other populations of spouses or family members. However, the identified needs reflected the needs of spouses during a difficult and stressful period. These needs may also be reflected in some of the needs of family members during other episodes of family member acute illness. The study is most important in that it served as a catalyst for other family needs studies. Many other investigators followed her recommendation to conduct studies to identify needs of spouses of acutely ill patients.

One of the important early investigations into the needs of family members that built upon the work of Hampe (1975) was a landmark study conducted by Molter (1976; 1979a). In an exploratory descriptive study, the investigator attempted to identify the personal needs of relatives of critically ill patients hospitalized in intensive care units, the importance of the needs to the relatives and whether the needs were being met. Based on crisis theory and Maslow's hierarchy of needs, Molter developed a 45 item needs statement instrument, the Needs of Relatives of Critically Ill Patients (NRCIP) (Molter, 1979b). She used the instrument to gather data during structured interviews with 40 relatives of critically ill patients within 48 hours after the patient had been transferred to a general care unit from a stay of three days or longer in the intensive care unit. Subjects responded to each need statement by rating, on a 4-point Likert-type scale, its importance at the time the patient was in the intensive care unit. Subjects were further asked to indicate whether the need had been met and by whom. The study's results supported Hampe's (1975) findings that relatives were easily able to identify their own needs.

Table 2 compares the needs of the Hampe (1975) subjects with the ten most and ten least important needs of the Molter (1976) subjects. A comparison of the needs in these two

studies revealed some marked similarities and some marked dissimilarities. Both groups of subjects perceived the needs to be with or near the patient, to be assured about the care of the patient and to receive accurate information about the patient as important. However, those needs that could be classified as relating to the well-being of the subjects rather than the patient were considered to be the least important in the Molter (1976) study but were identified by at least 25 (93%) of Hampe's (1975) subjects. It appears that when survival of the patient is no longer expected, as with Hampe's (1975) subjects, relatives become more concerned about their own well-being and need for support.

Molter (1976) found that most needs, and all of the ten most important needs, were met greater than 50% of the time. Many of the subjects who had identified a need as slightly or not important had not indicated whether or not the need had been met. Only four of the needs identified by the subjects as important or very important were met less than 50% of the time. These unmet needs were the need to: 1) talk to the doctor at least once a day; 2) be told about chaplain services 3) to have a place to be alone while in the hospital and 4) to have someone help with financial problems. Although these specific unmet needs are somewhat different than those identified in Hampe's (1975) study, there are some thematic similarities. Those needs related to a desire for information and reassurance and for an opportunity to deal with one's own emotions and feelings were unmet in both studies. As in the Hampe (1975) study, subjects indicated that hospital personnel were there to meet the patients' needs and not the relatives' needs.

Molter's (1976, 1979a) study had limitations, particularly related to the small sample size, the lack of reported validity and reliability of the instrument and the lack of categorization of the need statements. It is, however, important in two ways. Firstly, the reporting of the results has stimulated a vast amount of further research into the needs of

Table 2

Comparison of Needs of Spouses of Terminally Ill Patients (Hampe, 1975) with Needs of Relatives of ICU Patients (Molter, 1976)

Hampe (1975) ^a	Molter (1976) ^b Most Important Needs	Molter (1976) ^b Least Important Needs
1. be with dying patient	1. feel there is hope	36. others to help with problems
2. assured of comfort of dying person	2. feel personnel care about patient	37. someone concerned about own health
3. informed of mate's condition	3. have waiting room nearby	38. place to be alone in hospital
4. informed of impending death	4. called at home re: change in condition	39. alone at anytime
5. ventilate emotions	5. know the prognosis	40. told about help for family problems
6. acceptance, support, comfort from staff	6. questions answered honestly	41. encouraged to cry
7. comfort and support of family members	7. know facts about patient's progress	42. have person with me when visiting
8. be helpful to dying person	8. receive information once a day	43. visiting hours changed at times
	9. understandable explanations	44. help with financial problems
	10. see patient frequently	45. talk about negative feelings

Note. ^aNeeds numbered 1 to 5 are equal in importance and those numbered 6 to 7 are equal in importance. ^bThe lower the number, the greater the importance.

family members of patients in intensive care units. Secondly, the instrument, which has been modified into a self-administered format entitled the Critical Care Family Needs Inventory (CCFNI) (Molter & Leske, 1983), has been used, or adapted for use, in many subsequent critical care family needs studies.

The many studies using the original or adapted forms of the NRCIP or CCFNI instruments have identified spousal or family member needs in a wide variety of intensive care patient/family member populations including myocardial infarction, trauma, head and spinal cord injury, burns, cardiac surgery and general ICU populations (Alpen & Halm, 1992). Two meta-analyses, one qualitative (Hickey, 1990) and one quantitative (Leske, 1991a, 1991b, 1992a, 1992b), summarized the findings of many of the various need studies. These two analyses are now discussed, analyzed and compared.

Hickey (1990) qualitatively summarized the findings of eight reported studies in which replicable primary research on the needs of families of critically ill patients was reported: Molter (1979a); Rodgers (1983); Bouman (1984); Mathis (1984); Daley (1984); Leske (1986); Spatt, Ganas, Hying, Kirsch & Koch (1986); and O'Neill-Norris & Grove (1986). All reviewed studies utilized Molter's (1979b) original instrument, the CCFNI (Molter & Leske, 1983), or adaptations of them. Hickey (1990) examined the frequency with which family members in the eight studies rated specific needs among their 10 most important needs.

Leske (1991a; 1991b; 1992a; 1992b) undertook a meta-analysis of the results of 27 independent studies that utilized the self-administered CCFNI (Molter & Leske, 1983). Eight of the studies included in this analysis were the same as those in the Hickey (1990) qualitative analysis. Utilizing the procedure of latitudinal analysis, the investigator quantitatively analyzed the raw data originally collected by 27 nurse researchers in 15 states

over a period of 10 years in 38 different critical care units. The integrated sample included 905 family members who were related to 668 intensive care unit patients as a spouse, child, parent, sibling or significant other. Subjects ranged in age from 18 to 82 years (mean 45 years, SD 14 years). Twenty-nine percent of the subjects were male and 71% were female. Of the family members who indicated their relationship to the patient, 38% were spouses and 62% were non-spouses. Item means were calculated and the 45 items of the CCFNI were ranked according to mean scores. Needs related to having honest, current and understandable information about the patients prognosis, progress and treatment and to having assurance that the patient was well cared for were included in the subjects 13 most important needs. The need to feel there was hope was ranked fourth.

Table 3 lists and compares the most important needs identified by family members in the qualitative meta-analysis by Hickey (1990) and the quantitative meta-analysis by Leske (1991b). A direct comparison of the importance of specific needs was difficult owing to the different methods of analysis and reporting used in the two studies. However, there appears to be little, if any, substantive difference in the most important needs reported in each study. While specific items were ranked in slightly different order, the need for accurate, current, honest and understandable information about the patient's prognosis, progress and care was the primary category of need identified in both analyses. The needs to feel there is hope, to have reassurance that the patient was well cared for and to see the patient frequently were also similarly important in both analyses.

Leske (1991a) also used a principal components factor analysis to explore the underlying dimensions of the CCFNI and found that for critical care patients there were five relatively distinct categories of family member's needs. Table 4 lists these need categories and their mean scores. As the mean scores indicate, the need categories for assurance and

Table 3

Comparison of Critical Care Family Members' Needs Identified by Hickey (1990) and Leske (1991b)

Hickey (1990) ^a	Leske (1991b) ^b
1. have questions answered honestly (100%)	1. questions answered honestly
2. know facts re: what is wrong with patient and progress (100%)	2. assured best care given
3. know prognosis (90%)	3. know the prognosis
4. called at home about changes (90%)	4. feel there is hope
5. receive information daily (80%)	5. know facts about patient's progress
6. understandable explanations (80%)	6. called at home about changes in condition
7. believe personnel care about patient (80%)	7. know how patient is treated medically
8. have hope (70%)	8. feel personnel care about patient
9. know what/why things are done for patient (70%)	9. receive information daily
10. have reassurance about best possible care for patient (70%)	10. have understandable explanations
11. to see patient frequently (50%)	11. know what things done
	12. know why things done
	13. see patient frequently

Note: ^aLists those needs which were included amongst the 10 most important needs in at least 50% of the studies. Bracketed figure indicates the percentage of studies in which the need was included among the 10 most important needs. ^bLists needs, with mean greater than 3.50, in rank order according to item mean score.

Table 4

Importance of Critical Care Family Members' Needs by Category of Need (Leske, 1991a)

Need Category	Mean Score
Assurance (suggesting state of inspiring confidence, security, freedom from doubt)	3.80
Information (suggesting need for realistic information)	3.40
Proximity (suggesting the quality or state of being near)	3.27
Comfort (suggesting need for release from stress and sorrow)	3.05
Support (suggesting need for assistance or aid)	2.77

Note. Rank order by mean scores; minimum mean score = 1.00; maximum mean score = 4.00.

information rank the highest. This ranking of categories was consistent with the findings that needs related to having information about the patient and to having assurance about the quality of care given to the patient were ranked among the top 13 needs.

The least important needs of the subjects in Leske's (1992b) quantitative meta-analysis were also reported. All but one of the ten least important needs were included, by factor analysis, in the need category labelled as support. The subjects ten least important needs, ranking 36 to 45 on the 45 item instrument, were to:

36. have good food available in the hospital
37. be told about someone to help with family problems
38. have someone help with financial problems
39. have a place to be alone while in the hospital
40. be told about chaplain services

41. be told about other people that could help problems
42. talk about feelings
43. have another person with the relative while visiting the ICU
44. be alone a any time
45. be encouraged to cry

In a further analysis Leske (1992a) compared family member age, gender, relationship to patient, prior ICU experience, and patient medical diagnosis with the ratings of importance for the five need categories. This analysis revealed several statistically significant ($P < 0.01$) findings: 1) the need for comfort was rated significantly more important for older (51-70 years) and elderly (71-82 years) family members than for younger (18-30 years) family members; 2) female family members rated needs for support, comfort, information and proximity significantly more important the male family members; 3) family members with previous ICU experience rated comfort and information needs significantly more important; 4) Spouses and parents rated the need for comfort significantly more important that adult children. There were, however, no statistically significant differences among spouses', parents', and adult childrens' ratings of importance for support, information, proximity and assurance needs.

The majority of studies investigating the needs of family members of patients in intensive care units have used a mix of medical, surgical, cardiac and trauma patient diagnostic categories. Some studies, however, have identified the needs specifically of family members of patients undergoing cardiac surgery (Norheim, 1989; Rodgers, 1983) and of patients in surgical-trauma intensive care units (Price, Forrester, Murphy & Monaghan, 1991). The needs of family members in these studies were found to be substantively similar to those of the medical or mixed medical-surgical family member samples in other studies.

The preponderance of studies on the needs of critical care patient's family members have been conducted in the United States. However, three studies have addressed the needs

of Canadian family members of critical care patients (FitzGerald, 1990; Jocano, Hicks, Antonioni, O'Brien & Rasi, 1990; Rukholm, Bailey & Coutu-Wakulczyk, 1991). These studies revealed that the needs identified by Canadian family members were substantively similar to those identified by American family members.

The research into the needs of family members of critically ill patients is extensive. The many empirical studies demonstrated that these family members could identify their needs and that the most important identified needs were consistently similar across various populations in critical care settings. However, the needs of family members of patients in critical care areas may or may not be similar to the needs of family members of patients hospitalized, after surgery, on general nursing units.

Needs of Family Members of Adult Surgical Patients

While the research into the needs of family members of critical care patients is extensive, the research identifying the needs of family members of major surgical patients not hospitalized in intensive care units is very limited. Only three studies were found that proposed to identify the needs of family members of surgical patients (Bethel, 1981; Carmody, Hickey & Bookbinder, 1991; Silva, 1987). This last section of the literature review examines these three studies, compares each study's results with data obtained in critical care family needs research and then compares the results of the three studies with each other. Each study will be discussed in chronological order followed by a comparison of the needs identified.

Bethel (1981) conducted an exploratory descriptive study in which she identified the needs of spouses of patients undergoing elective abdominal surgery. Building the study upon the work of Hampe (1975) and Molter (1976; 1979a), she developed a structured interview schedule composed of 45 need statements based on her personal experience and information

gleaned from the literature. Although some of the items were similar to those in Molter's (1976; 1979a) instrument, and consequently the more recent self-administered format of the same instrument (Molter & Leske, 1983), many differed substantively in content or wording. Content validity for the items was established.

Bethel interviewed nine male and ten female spouses ranging in age from 24 to 67 (mean 49.9 years) during, or soon after, the patient's intra-operative period. The patients had undergone one of several types of abdominal surgery (ie. herniorrhaphy, $n=12$; cholecystectomy, $n=5$; exploratory laparotomy, $n=1$; and gastrectomy, $n=1$). Subjects responded to the 45 need statements by indicating how important the need was to them on a scale of one (Not Important) to four (Very Important). Item mean scores were calculated and the need statements were ranked according to mean scores.

Although the instruments used were different, when the 12 most important needs were analyzed within the context of critical care family needs (Leske 1991a; 1991b), some notable similarities and differences became evident. The most important needs identified in Bethel's (1981) study reflected themes similar to the most important needs in Leske's (1991b) meta-analysis, with two exceptions. Firstly, the need to be hopeful was a very important need for critical care family members (Leske, 1991b) but was not expressed as an important need for general surgery family members. While the differences with regard to this need could be related to the low level of surgical acuity of most of Bethel's (1981) patient-family subjects, the fact that Bethel did not ask a question regarding hope would also account for the difference. Secondly, the family members in Bethel's study also differed from critical care family members in that some of general surgery family members' needs were more future oriented and expressed a need to know more about what will happen after the patients' discharge from hospital.

Bethel (1981) qualitatively grouped the 45 items under five categories with nine items in each category and calculated mean scores for each category. Table 5 lists, in order of importance based on mean score, the five need categories in Bethel's study. While there was not a direct parallel between these need categories and the quantitatively derived categories in Leske's (1991b) meta-analysis, there was a similarity in importance in that in both cases the subjects viewed their own comfort and support needs as less important than being assured that the patient was comfortable and well cared for.

Bethel's (1981) study is, however, severely limited in its generalizability. Limitations of the study included: 1) the small sample size ($n=19$); 2) the lack of reported instrument reliability; 3) the double-barrelled nature of some of the questionnaire items so that they do not clearly indicate a single need (eg. "to be informed of ways you can help your mate physically and emotionally when he/she goes home"); 4) the limited variety and acuity of patients' surgical diagnoses; and 5) the sample limited to spouses.

Silva (1987) also investigated what needs were most important to spouses of patients undergoing general surgery. Using a self-administered questionnaire, adapted from Molter's (1979b) NRCIP, she collected data from 75 spouses (46 men and 29 women) of patients undergoing major general surgery (cholecystectomy, herniorrhaphy, hysterectomy or prostatectomy) for an expected benign outcome. Subjects ranged in age from 23 to 76 years (mean = 50.1 years). Questionnaires were administered between the patient's first post-operative day and day of discharge from the hospital. The instrument consisted of 46 individual need items in which the even-numbered items constituted one equivalent half of the instrument and the odd-numbered items constituted the other equivalent half. The subjects responded by checking one of five categories of need importance ranging from "not important" to "always important". Because of the similarity of responses between the even-

Table 5

Importance of Spouses' Needs by Category of Need (Bethel, 1981)

Need Category	Mean Score
Cognitive clarity (to gain knowledge and understand information with accuracy/clarity)	3.21
Communication (to understand how information may be exchanged, requested received)	3.15
Security (to be free from apprehension, doubt, insecurity)	2.95
Association (to be with the mate and included in the experience of the surgical event)	2.85
Expression/Nurturance (to reveal feelings/ emotions/opinions and to be supported/accepted/comforted by others)	2.60

Note. Minimum mean score = 1; maximum mean score = 4.0

numbered and odd-numbered items, Silva (1987) reported the mean scores, frequencies and percentages for only the 23 even-numbered items. Factor analysis revealed four need categories, the most important of which was psychosocial needs, but the categories did not encompass all items on the instrument.

When the findings of Silva's (1987) study were compared to critical care family members' needs, some similarities and differences amongst identified needs were noted. The five most important needs of subjects in this study closely resembled some of the most important needs of subjects in the Leske (1991b) quantitative analysis; the top five needs of the Silva (1987) subjects were the same as, or substantively similar to, six of the top 10

needs in the Leske (1991b) study. There were some notable differences, however, between the needs of Silva's (1987) general surgery families and Leske's (1991b) critical care families, including: 1) the general surgery patients' families ranked high (ninth) the need "to know what to do for the patient when with him/her" but critical care patients' families ranked a similar need "to have directions as to what to do at the bedside" substantively lower (30th); and 2) the general surgery patients' family members ranked high (11th) the need "to feel able to help with some of the care" but critical care patients' families ranked the similar need "to help with the patient's physical care" substantively lower (27th). These differences may have been related to two facts: 1) the general surgery patients were much less acutely ill than the critical care patients so that family members were less fearful about participating in the care; and 2) the sample in the general surgery study (Silva, 1987) was composed of only spouses who may have been more inclined to participate in caring for the patient than siblings, children or parents. A further difference was noted in that the need "to feel there is hope" was ranked high (fourth) by critical care patients' families but was not identified at all by the general surgery patients' families. This difference might have been related to the fact that Silva did not specifically address the issue of hope. However, the difference might also have been related to the fact that all patients had expected a benign outcome to their surgery

Some of the needs of subjects in Silva's study closely resembled those in the Bethel (1981) study, particularly in relation to the need for honest and understandable information about the patient and in relation to the need for assurance of quality care for the patient. The subjects in Silva's study, however, expressed an interest in assisting with the care of the patient while he or she was in the hospital whereas the Bethel (1981) study revealed that subjects were interested in knowing how to help the patient only after discharge.

While the sample size in the Silva (1987) study was adequate and the validity and reliability of the instrument were established, the generalizability of the findings were limited for several reasons. Firstly, the surgical diagnostic categories included in the study did not reflect the variety nor acuity of patient diagnostic categories found on a general surgery unit. Secondly, only family members of patients with an expected benign outcome were included in the sample. Thirdly, the sample was limited to spouses, whose needs may have been significantly different from those of other family members.

The last, and most recent, study reported in the literature identified the needs of family members of patients undergoing cancer surgery specifically during the peri-operative period (Carmody, Hickey & Bookbinder, 1991). The investigators used a 20 item self-administered instrument, adapted from Molter's (1979b) interview guide, to collect data from a convenience sample of 21 males and 28 females (mean age=45.6 years, SD=14.3 years) who were related to patients as spouses (45%), children (29%) and parents, grandchildren and siblings (26%). Data was collected during the time the patients were in the operating room. The majority of the patients had undergone major surgical procedures (eg. thoracotomy, laryngectomy, gastric or abdominal procedures) for cancer. The subjects responded to the instrument by rating the need statements on a five-point scale ranging from "not at all important" to "extremely important". Needs were ranked according to the percentage of subjects who indicated the need was "very great" or "extremely important". Subjects were also asked to indicate on a three-point scale the degree to which the need was met.

The family members' needs identified in this study are again similar to previous studies in relation to the need for information and assurance about the welfare of the patient. The need for hope and the need to be with the patient as much as possible also gained

considerable importance in this study, as they had in the previous critical care family studies (Leske, 1991b). The importance of the need for hope expressed by the subjects in this study may have been directly related to the extensiveness of the patients' surgery for malignancy and to the fact that surgery was still in progress when the family member completed the questionnaire. The lowest ranking needs pertained to having a restaurant near the waiting area and to being encouraged to talk about feelings. For ten of the top 12 ranked needs, between 80% and 100% of the subjects felt that the need was either moderately or completely met.

While Carmody, Hickey and Bookbinder (1991) broadened their sample to include family members other than spouses and to broaden the diagnostic categories to include more acutely ill surgical patients, the generalizability of their findings was limited. Firstly, instrument reliability was not reported. Secondly, all patients had malignant diagnoses. Thirdly, data were collected only during the intra-operative period. And lastly, the sample size was inadequate.

Table 6 compares the 12 most important needs identified by the family members of general surgery patients in three separate studies (Bethel, 1981; Carmody, Hickey & Bookbinder, 1991; Silva, 1987). Although the patients' and subjects' characteristics, as well as the instruments for data collection were different in the three studies, the important needs identified by the subjects were very similar. Subjects in all three studies expressed the same important needs related to having access to information and to being kept well informed, in honest and understandable terms, of the patient's surgery, condition and progress. Assurance that the patient was well cared for by caring staff and having information about how to help the patient following surgery were, as well, viewed as very important by subjects in all three studies. When the level of illness acuity arose, as in the Carmody, Hickey and Bookbinder

(1991) study, the need for feelings of hope emerged as very important for the subjects.

The needs perceived as important by family members of surgical patients hospitalized on general surgical units in three separate studies are very similar. Further, it appears that subjects in both critical care and general surgical settings expressed some of the same important needs, particularly related to the need for information and assurance about the patients' progress and care. However, the three studies that examined the needs of surgical family members had substantive limitations which limit the generalizability of their findings. In addition, the use of different instruments and different categories of needs has limited the comparison of the needs identified by family members of surgical family members with each other and with the needs identified by family members of critical care patients.

Summary

This literature review has discussed four areas related to the investigation of needs of family members of major surgery patients. In the first section, the effects of patient illness and surgery on family members and the importance of meeting family member needs was established. In the second section, the topic of needs and assessment of needs was discussed. Section three examined the extensive amount of research which has identified the needs of family members of critical care patients. The last section dealt with the limited amount of research that has addressed the needs of family members of major surgical patients hospitalized on non-intensive care units.

The review of the literature has demonstrated that, while the research addressing the needs of family members in ICU has been extensive, the research identifying the needs of family members of surgical patients has been severely limited. It is evident that further research is needed to clearly identify the needs of family members during the surgical experience and to conceptualize those needs in logical need categories.

Table 6

Comparison of Most Important Needs of General Surgery Patients' Family Members by
Bethel (1981), Silva (1987) and Carmody, Hickey and Bookbinder (1991)

Bethel (1981) ^a	Silva (1987) ^b	Carmody, Hickey & Bookbinder (1991) ^c
1. told outcome of surgery	1. feel personnel taking good care of patient	1. speak with Dr. when surgery over
2. called at home if condition changes	2. called at home if change in condition	2. know probable outcome of illness
3. know mate receives prompt attention	3. told about surgery in understandable terms	3. know what to do to help patient after surgery
4. questions answered honestly and understandably	4. know about patient progress during hospital stay	4. know what to expect on day of surgery
5. know normal experiences mate will have in first 24-48 hours	5. have questions answered honestly	5. have understandable explanations
6. information about follow-up care	6. feel free to talk with staff	6. feel personnel care about patient
7. know which staff members can give which information	7. know how to contact staff for help	7. kept informed of patient's condition
8. information about medications/side effects	8. know where to wait during surgery	8. feel there is hope
9. information about ways to help mate at home	9. know what to do for patient when with him/her	9. be with the patient as much as possible
10. talk to Dr. if concerned	10. know how to locate hospital services	10. have a specific nurse to call after surgery
11. how long for mate to return to full activity	11. feel able to help with some care	11. have specific facts about progress in surgery
12. assured can call at any time for information	12. feel accepted by staff	12. know what Dr. has told patient about surgery

Note: ^aRank order based on item mean score. ^bRank order based on mean score. ^cRank order based on percentage of subjects rating need as very great or extremely important.

Conceptual Framework

This study was conceptualized within the framework of the University of British Columbia (U.B.C.) Model for Nursing (Campbell, 1987).

This model views the individual as a behavioural system composed of nine interrelated and interdependent subsystems each responsible for the satisfaction of one basic human need through the achievement of a corresponding need-related goal. The goal is the desired end state to be attained. For example, with respect to the need for mastery, the goal is to attain feelings of accomplishment and satisfaction with accomplishments. The multiple and co-existing needs, experienced as tensions, are operative at all times. While not hierarchical in nature, some needs may be viewed by the individual as requiring satisfaction more than other needs at a given period of time. Table 7 names the UBC Model's nine subsystems, needs and goals.

The individual uses a range of coping behaviours in an attempt to satisfy each co-existing need. An individual's coping behaviours are organized into repetitive predictable patterns that become his or her characteristic way of attempting to satisfy needs. Positive and negative forces influence the way in which the goal is achieved and the degree to which it is achieved by the individual. Each family member may act as a significant positive or negative force for the individual (Campbell, 1987, p. 29).

Should an individual experience an unpredictable event, such as of hospitalization for surgery, the individual may view some needs as requiring satisfaction more than other needs or his or her coping behaviours may no longer be suitable for meeting basic needs. Needs may not be met because positive forces arising from other family members are no longer available or are no longer sufficient to facilitate goal achievement in view of negative forces arising from the illness and its treatment.

Table 7

The UBC Model for Nursing: Subsystems, Needs and Goals (Campbell, 1987)

Subsystem	Need	Goal
Achieving	For mastery	Feelings of accomplishment; satisfaction with accomplishments
Affective	For love, belongingness and dependence	Feelings of love, belongingness and dependence
Ego-valuative	For respect of self by self and others	Self-esteem
Excretory	For collection and removal of accumulated wastes	Absence of accumulated wastes
Ingestive	For intake of food and fluid: nourishment	Nourishment: satisfaction of hunger and thirst
Protective	For safety and security	Integrity of the system
Reparative	For balance between production and utilization of energy	Capacity for activity
Respiratory	For intake of oxygen	Oxygenation; easy respirations
Satiative	For stimulation of the system's senses (ie. hearing, vision, smell, touch and taste)	Sensory satisfaction

Family members, each behavioural systems in themselves, also use coping behaviours in repetitive patterns in an attempt to meet their basic needs. The hospitalization of the individual may also constitute an unpredictable event for the family members who may view some needs as requiring satisfaction more than other needs or whose own coping behaviours may be no longer suitable for meeting needs. Thus, both the hospitalized individual's and the family members' needs may not be met, resulting in behavioural system imbalance for each.

Nursing's unique function, as viewed in the U.B.C. Model for Nursing (Campbell, 1987) is: "...to nurture individuals experiencing critical periods so that they may develop and

use a range of coping behaviours that will permit them to satisfy their basic human needs, to achieve stability, and to reach optimal health" (p. 10). The author of this paper believes that, as well as nurturing the hospitalized individual, nursing's role includes nurturing family members so that they may use coping behaviours suitable to satisfy their basic needs. In doing so, the nurse's goal is to facilitate the family member to be a positive force for the hospitalized individual.

For the purposes of this study, the nine basic human needs of the UBC Model for Nursing were used as a framework to categorize the needs identified by individual adult family members of adult patients hospitalized for major general surgery. This particular needs framework was chosen because, in recognizing the multiple and co-existing nature of needs, it has not ordered the need categories in a hierarchy. This lack of hierarchical arrangement of needs permits the perspective that an individual may perceive any need as more important to satisfy at a particular period of time.

Summary

In Chapter Two, two components of this thesis have been discussed. In the first section, a review of the literature related to the investigation of the needs of family members of major surgery patients was presented. In the second section, the conceptual framework of this study was presented.

CHAPTER THREE

Methods

Introduction

This chapter describes the research design, sample selection, data collection procedure, instruments for data collection, pilot study, data analysis procedures, assumptions and limitations and procedures for protection of human rights.

Research Design

A descriptive survey design was used in this study. This research design permitted the researcher to describe the prevalence, and estimate the value, of a phenomenon for a population (Woods & Catanzaro, 1988).

Sample

Target population

The target population consisted of all adult (18 years or older) family members who visited adult (18 years or older) patients who had undergone major surgery and were hospitalized for at least three days post-operatively on the non-intensive care units of a medium sized hospital in a suburban/rural type community. Family members were those who were related to the patient by blood, marriage, adoption or affinity as a significant other. The unit of analysis was the individual family member.

Sample

The sample consisted of 80 subjects who were family members of 68 adult major surgery patients hospitalized in one of four surgical nursing units. The sample was selected through convenience sampling.

Family member subjects selected for inclusion in this study met the following criteria:

1. They were 18 years of age or older.

2. They were related to an adult surgery patient, who met the specific criteria, by blood, marriage, adoption or affinity as a significant other.
3. They were able to read and write English.
4. They did not demonstrate any major overt psychopathology.
5. They visited the patient post-operatively.

The adult major surgery patients whose family members were selected for inclusion in the study met the following criteria:

1. They were 18 years of age or older.
2. They were hospitalized immediately following recovery room care on a non-intensive care unit.
3. They were hospitalized for at least three days postoperatively.
4. They had undergone an extensive open surgical procedure involving incisional intervention and a procedure involving the respiratory system, digestive system (gastrointestinal tract and hepato-biliary system), urinary system, male and female reproductive system, breasts, musculoskeletal system and/or peripheral vascular system (arterial and venous). All surgical procedures, including those for known malignancies, life threatening conditions and emergencies were included.
4. They were under the care of a surgeon who had granted permission for his or her patients' families to be included in the study sample.

Data Collection Procedure

Participants for this study were obtained from the surgical units of a 741 bed acute, rehabilitation and extended care hospital located in a city in the southern interior region of British Columbia, Canada. The hospital provides acute care health care services for a population of approximately 110,000 care and performs approximately 5,500 in-patient

surgical procedures yearly.

Selection of the potential patient/family subjects was done by the Head Nurse and/or delegate according to the sample selection criteria. Seventeen surgeons consented to have the Head Nurse approach patient/ family members who met the selection criteria. Questionnaire packages for all subjects were prepared and contained: 1) an introductory letter explaining the study and the subjects participation (Appendix A); 2) a letter of introduction from Kelowna General Hospital (Appendix B); 3) the questionnaire with instructions and demographic information form (Appendix C); and 4) a stamped self-addressed envelope.

The Head Nurse or delegate approached the patient and/or the family member, briefly explained the study and obtained verbal consent for the investigator to approach the patient and/or the family member. If consent to approach the patient was obtained, the investigator met with the patient, further explained the study and gained the patient's permission to contact selected family members. Depending on what the patient and investigator determined would work best in that particular situation, the investigator then: 1) phoned the selected family member(s), discussed the study and their involvement, gained their verbal consent to participate, and determined with them the best way to facilitate the completion of the questionnaire; or 2) contacted the family member(s) on the nursing unit during visiting hours, discussed the study with them, and provided them with the questionnaire package if they verbally consented to participate; or 3) left the questionnaire package with the patient for him or her to give to the family member(s) for completion.

If consent to directly contact family member subjects was obtained, the investigator: 1) phoned the selected family member(s), discussed the study and their involvement, gained their verbal consent to participate and determined with them the best way to facilitate completion of the questionnaire; or 2) contacted the family member(s) on the nursing unit,

discussed the study with them, and provided them with the questionnaire package if they verbally consented to participate.

Subjects completed the questionnaire where they wished and returned the completed questionnaire either by leaving it at the nursing station in a sealed envelope or by mailing it to the investigator. In all cases, completion and return of the questionnaire implied formal consent.

Instruments for Data Collection

One instrument was used for data collection in this study. The self-administered Major Surgery Family Needs Inventory (MSFNI) was used to identify the needs of family members and whether or not the needs were met (Appendix C). An information form was appended to the MSFNI to collect selected demographic and health information about the patients and about the family members (Appendix C).

The MSFNI

The MSFNI consisted of a slightly modified version of the previously developed Critical Care Family Needs Inventory (CCFNI) (Molter & Leske, 1983) with additional items developed and added by this investigator. The investigator received permission to use and adapt the CCFNI from its developers. Information about the original critical care version (CCFNI) will be presented first followed by information about the changes made and questions added for use with the family members of non-intensive care surgical patients in this study.

The CCFNI

The CCFNI is a self-administered pencil-and-paper instrument which has been designed to measure the multi-dimensional concept of family needs of patients hospitalized in critical care areas. The questionnaire consists of a randomized list of 45 need statement items

identifying possible needs of family members. Respondents are requested to identify how important each need statement is to them by checking on a 4-point Likert-type scale ranging from 1 (not important) to 4 (very important). An additional open ended item has been added to identify any needs not included in the 45 need statements.

Validity and reliability have been established with samples of family members of both medical and surgical patients in intensive care units (Leske, 1986, 1991a, 1992a; Molter, 1976). However, validity and reliability of the instrument have not been established with samples of family members of surgical patients hospitalized on general surgical floors.

Content validity for the ICU setting has been established by numerous researchers using panels of experts (Daley, 1984; Leske, 1986; Molter, 1976). Construct validity has been established using exploratory stepwise factor analysis to summarize the interrelationships among items on the CCFNI (Leske, 1991a). The five underlying dimensions of the instrument were labelled respectively as the needs for support, assurance, proximity, comfort and information.

Internal consistency reliability of the total scale has been reported, according to Cronbach's alpha, as ranging from 0.88 to 0.98 (Leske, 1986, 1991b, 1992b). Reliability of the total scale with samples of surgical patient family members in intensive care has been reported with alpha coefficients as 0.88 (Norheim, 1989) and 0.93 (Rodgers, 1983). Three of the five underlying dimensions or subscales are reported as having internal consistency coefficients of 0.70 or greater (support, 0.88; comfort, 0.75; and information, 0.78) and deemed adequate for exploratory research (Leske, 1992a). The remaining categories of assurance and proximity have reported alpha coefficients of 0.68 and 0.67 and are deemed suitable for group comparisons (Leske, 1992a). Item-total correlations have been calculated on all items and, based on the criteria of greater than 0.20 and less than 0.70, no items have

been found redundant or lacking in homogeneity with the construct (Leske, 1991a). The instrument has been found to have reasonable test-retest reliability with percentage agreements of 70% or greater for 86.7% of the items (Macey & Bouman, 1991). A Gunning Fog Index of 8.6 for the CCFNI indicated that the instrument falls within the grade nine education or "easy to read" level (Macey & Bouman, 1991).

Modification of the CCFNI.

Seven CCFNI items were slightly modified by this investigator in order to ensure applicability of items to the setting of this study. Table 8 illustrates the specific changes that were made to the items. This investigator believed that the minor modifications made to the original questionnaire did not invalidate the established validity and reliability of the instrument.

The 45 items contained in the CCFNI were scrutinized to determine if they adequately addressed all of the nine need categories of the UBC Model (Campbell, 1987) and to further determine which needs were specifically addressed by each item (Appendix D, items 1 to 29 and 31 to 46). In some cases, the items reflected only one human need. In other cases, however, an individual item reflected more than one human need. For example, those items related to knowing and understanding often reflected both the need for safety and security and the need for mastery. As Appendix D demonstrates, the psychosocial needs (love, belongingness and dependence and respect of self) were well addressed by the items as either a primary focus of the item (*) or a secondary focus (**). The safety and security needs were likewise well addressed and the need for mastery was addressed to some extent. However, the remaining need categories that pertain to physiological needs were not well represented by the items contained in the CCFNI.

Table 8

Modifications Made to CCFNI Items by Investigator

Original Wording in CCFNI	Modified Wording in MSFNI
Have explanation of the environment before going into the critical care unit for the first time	Have an explanation of what to expect before seeing the patient for the first time after surgery
Have comfortable furniture in the waiting room	Have comfortable furniture available
Have a telephone near the waiting room	Have a telephone nearby
Have a pastor visit	Have a pastor (clergy, minister, priest, rabbi, etc) visit
Have another person with you when visiting the critical care unit	Have another person with you when visiting
Have a bathroom near the waiting room	Have a bathroom nearby
Be told about transfer plans while they are being made	Be told about discharge plans while they are being made

In order to address the deficiency in items for some UBC Model need categories and to ensure that all important needs of family members were identified, the investigator added and slightly modified items used by other investigators (Bethel, 1981; Silva, 1987). Items from these studies had content validity and clarity established by their developers. In addition, new items were developed based on a review of the literature, personal experience of the investigator and informal discussion with surgical family members personally known to the investigator. An open-ended question to elicit any further needs that family members may have felt they had was also added. The items incorporated from other questionnaires or developed by the investigator are number 30 and numbers 47 to 63.

In order to address the degree to which each need was met, the investigator included a three point Likert-type scale on which respondents indicated whether or not their need was met. The following values were assigned to the degree to which needs were met: Not Met, (1); Partially met, (2); and Fully Met, (3).

Validity and Reliability of the MSFNI

Three surgical head nurses, a Director of Nursing with a clinical background in surgery and who was also a Master of Nursing student, and two Master of Science in Nursing students with knowledge of surgical nursing and the UBC Model for Nursing (Campbell, 1987) were consulted to establish the relevancy of the 45 CCFNI items for use in this study and to ensure the clarity and relevancy of the other items added by the investigator.

In this study, the internal consistency reliability alpha for the total MSFNI scale was 0.96. The alpha coefficients for the items in the 9 subscales based on the need categories of the UBC model (Campbell, 1987) are displayed in Table 9. The alpha coefficients for seven of the nine subscales exceeded 0.60 and were therefore acceptable for making group level comparisons (Polit & Hungler, 1991). The alpha coefficient for the intake of food/fluid subscale was low at 0.52 but it only consisted of two items. It was not possible to calculate an alpha for one subscale (intake of oxygen) as the subscale consisted of only one item.

The MSFNI had a Gunning Fog Index of 9.5, indicating that it was within the grade 10 reading level and therefore sufficiently easy to read for the sample used in this study.

For purposes of comparison, the internal consistency reliability alpha for the 45 items and for the five subscales of the CCFNI were calculated. The alpha for the total scale remained high at 0.93. The reliability coefficients for the five subscales of the CCFNI ranged from 0.86 to 0.73 (support, 0.86; information, 0.85; assurance, 0.83; proximity, 0.80; and comfort, 0.73).

Table 9

Internal Consistency Reliability Coefficients for MSFNI Subscales

UBC Subscale	Alpha Coefficient
Mastery	0.81
Love/Belongingness/Dependence	0.78
Respect of Self	0.83
Safety/Security	0.92
Intake of Food/Fluid	0.52
Sensory Stimulation	0.70
Energy Prod/Utilization	0.60
Waste Collection/Removal	0.63
Intake of Oxygen	(No alpha - one item in subscale)

Demographic and Health Information Form

The investigator developed a demographic and health information form designed to be appended to the MSFNI (Appendix C). This two-part form solicited selected demographic and health information about the patient and the family member from the family member. Items in the first part included information about the patient's sex, age, surgery, diagnosis, and health, hospitalization and surgical history. Items in the second part included information about the subjects sex, age, occupation, relationship to patient, health and surgical history, whether the subject was staying in his or her own home at the time and whether the patient was staying with the subject following discharge.

Pilot Study

Prior to beginning the study, a pilot study was done to determine the clarity of the questionnaire and to ascertain if any need statements should be added. Discussions were held

with seven subjects. None of the subjects reported any difficulty understanding the questionnaire or the need to include any additional items.

Data Analysis

Raw data from the questionnaire were coded, entered into a computer file and analyzed using the Statistical Program for the Social Sciences (SPSS/PC). Missing data were dealt with in two ways. Firstly, for 13 subjects who missed responding to 17 of the items relative to the importance of the need, the investigator assumed that, for them, that particular need was not important and recoded the data as 1, Not Important. Secondly, for all items for which subjects failed to indicate whether or not the need was met, data were coded as missing and the items were not included in the calculation of statistics.

Descriptive and parametric statistics were used to analyze the data. Descriptive statistics provided a means to describe the characteristics of the sample and the variability in subjects responses for research questions one and two. Independent t-tests were used to assess the differences between group means of importance for males and females and for spouses and non-spouses (research question four). The Pearson's Product Moment Correlation test was used to determine the relationship between the age of patient and the importance of the needs and the age of the respondent and the importance of the needs (research question three). Parametric tests (independent t-test and Pearson's Product Moment Correlation test) were used because they are more powerful and robust and can be used with interval level data when the data is reasonably well distributed (Polit & Hungler, 1991). The written responses to the open ended question (#63) were analyzed and themes related to needs were identified. The level of significance used for this study was 0.05.

Assumptions

For the purposes of this study, the following assumptions were made:

1. Family members could identify their own individual needs, the importance of those needs to them and whether those needs were met.
2. Family members responded honestly to the questionnaire used.
3. Incorporating the needs of family members into the care of surgical patients is essential for the provision of total patient care.
4. Giving attention and consideration to the needs of family members of surgical patients is one of the roles of a nurse on a surgical nursing unit.

Limitations

This study had the following limitations:

1. Because a convenience sample was drawn from four surgical units in one interior British Columbia hospital, the sample may not be representative of the population of family members of major surgery patients.
2. The findings of this study are not generalizable to other patient groups.
3. Because the instrument used in this study was a modified version of an instrument with well established validity and reliability for family member populations in intensive care areas (Leske, 1991a; Molter, 1979a), the reliability both of the modified instrument for family members and its use in non-intensive care areas was not established prior to its use in this study.

Ethics and Human Rights

This study protected the human rights of the subjects and was conducted in an ethical manner. Prior to conducting the study, permission was obtained from the University of British Columbia Behavioural Sciences Screening Committee for Research and Other Studies

Involving Human Subjects. In addition, written permission was obtained from the Kelowna General Hospital: 1) Ethics and Biomedical Assessment Committee; 2) Nursing Research and Quality Management Committee; 3) Vice President - Patient Care Services; and 4) Chief of Surgery and 16 other surgeons.

All of the potential participants received an introductory letter (Appendix A) that outlined the purpose of the study and the nature of their participation as well as statement that indicated their return of the questionnaire implied they had consented to participate in the study. The letter also informed participants that they were under no obligation to participate in the study and that their decision regarding participation would in no way affect the present or future care of themselves or their family members. The researcher's name and telephone number were included in the letter and participant's were invited to contact the researcher should they have any questions or concerns about the study.

Confidentiality was maintained throughout the study. The names of participants did not appear on the questionnaires as each participant was assigned a code number and questionnaires were returned in sealed envelopes.

Summary

In Chapter Three the research methods have been discussed. The research design, sample selection, data collection procedures, instruments for data collection and pilot study are presented first. The data analysis procedures are then presented followed by the assumptions and limitations of the study and the procedures for protection of human rights.

CHAPTER FOUR

Presentation and Discussion of Results

Introduction

This chapter consists of three sections. The first section provides a description of the characteristics of the sample. The second section presents the findings and the final section provides a discussion of the results.

Characteristics of the Sample

The sample consisted of 80 adult family members of 68 adult major surgery patients hospitalized post-operatively in non-intensive care units. The total number of patients approached by the Head Nurses is not known and records of why people approached declined to participate were unfortunately not kept. The researcher approached a total of 96 patients' families, through either the patient or a family member, to ask them to consider participation in the study. Three patients declined to involve their family members in the study with one stating that she did not want her mother to know any information, another stating she did not want to further worry her husband, and another stating that she was the one with the needs, not the family members. A total of 120 questionnaires were distributed to family members of 93 patients. Of the 120 questionnaires distributed, 72 were given to females with 55 (75%) returned and 48 were given to males with 26 (54%) returned. Sixty-nine questionnaires were given to spouses with 50 (72.5%) returned and 51 were given to non-spouses with 31 (60.8%) returned. A total of 81 questionnaires from family members of 69 patients were returned representing an overall response rate of 67.5 %. One returned questionnaire was not included in data analysis because the last three pages of the questionnaire were not completed. Sixty-six (83.5%) of the family members completed the questionnaire during the 3-to-11 day period following the patient's surgery and of these 66,

48 completed the questionnaire during the time the patient was in the hospital.

The sample will be described from two perspectives. Firstly, the patients of those family members will be described in terms of their demographic (gender and age) and health history characteristics, and their surgical procedures during the present admission. All information relative to the patients was provided by the family members. Secondly, the family members themselves will be described in terms of demographic characteristics (age, sex, occupation and relationship to patient), personal experience with hospitalization and surgery, and where they stayed during and after the patient's hospitalization.

Demographic Characteristics of the Patients

The patient group was composed of 30 males (44.1%) and 38 females (55.9%). The age of the patients ranged from 19 to 83 years ($M=59.1$, $SD=13.7$, $Median=60$). Thirty-eight percent ($n=26$) of the patients were 65 years or older, a further 38 percent ($n=26$) were between the ages of 50 and 64 years and the remaining 24 percent ($n=16$) were between the ages of 20 and 49. Table 10 presents the distribution of patient ages.

Table 10

Patient Age Distribution

Age Category	Frequency	Percent
19 and below	1	1.5
20 - 29	1	1.5
30 - 39	5	7.3
40 - 49	9	13.2
50 - 59	14	20.6
60 - 69	21	30.9
70 - 79	16	23.5
80 and over	1	1.5
TOTAL	68	100.0

Health History Characteristics of The Patients

Data collected regarding the patient's health history included information about the patient's previous surgical and hospitalization history and complicating health problems.

Of the 68 patients, 64 (94.1%) had been hospitalized previously and 57 (83.8%) had undergone surgical procedures during one or more of their previous admissions. Forty-eight of the 57 patients who had previously undergone surgery were reported to have undergone surgical procedures that would fall within the operational definition of major surgery used in this study.

Thirty-six (52.9%) of the patients were reported as having complicating health problems. The complicating health problems reported included the following: heart disease; chronic lung disease; hypertension; ulcerative colitis; Crohn's disease; diabetes; arthritis; leukaemia; epilepsy; and obesity.

Surgical Procedures Performed on Patients During Current Admission

During the current admission, the 68 patients had undergone a broad range of types major surgery which fell into seven general categories: gastrointestinal/biliary; orthopaedic; urologic; pulmonary; vascular; gynaecological; and breast. Of the 68 surgeries performed, 22 (32.5%) were related, and 45 (66.2%) were not related, to a diagnosis of cancer. In one case it was not known whether or not there was a diagnosis of cancer. Table 11 presents the frequencies of specific types of surgeries and the frequencies and percentages of categories of surgery performed on the patients.

Table 11

Surgical Procedures Performed on Patients During Current Admission

Surgical Procedure	Frequency	Percent
Gastro-Intestinal/Biliary		
Bowel Resection	11	
Resection with Colostomy	3	
Closure Colostomy/Ileostomy	4	
Gastrectomy	2	
Esophagectomy	1	
Freeing of Adhesions	3	
Cholecystectomy	5	
Other	5	
Total	34	50.0
Orthopaedic		
Total Hip Replacement	7	
Total Knee Replacement	5	
Hip Pinning	1	
Total	13	19.1
Urologic		
Radical Prostatectomy	2	
Cystectomy/Urinary Diversion	2	
Kidney	1	
Total	5	7.4
Pulmonary		
Lobectomy	4	
Thoracotomy	1	
Total	5	7.4
Vascular		
Arterial bypass (leg)	1	
Total	1	1.5
Gynaecologic		
Hysterectomy (Total)	4	
Repair Uterine Prolapse	1	
Oophorectomy	3	
Total	8	11.7
Breast		
Mastectomy	2	
Total	2	2.9
TOTAL	68	100.0

Demographic Characteristics of the Family Members

The 80 family members provided demographic information relative to their sex, age, relationship to patient, and occupation. This group was composed of 26 (32.5%) males and 54 (67.5%) females. Their ages ranged from 20 to 92 years ($M=56.04$, $SD=14.95$, Median=58). Twenty-seven (33.8%) of the family members were 65 years or older. Table 12 presents the distribution of family members' ages.

Table 12

Family Member Age Distribution

Age Category	Frequency	Percent
20 - 29	4	5.0
30 - 39	7	8.8
40 - 49	16	20.0
50 - 59	15	18.8
60 - 69	26	32.5
70 - 79	10	12.5
80 and over	2	2.5
TOTAL	80	100.1

The relationship of the family member to the patient was determined. The sample comprised 49 (61.3%) spouses and 31 (38.8%) non-spouses. Table 13 presents frequencies and percentages for the categories of subject relationship to patient.

Table 13

Family Member Relationship to Patient

Relationship to Patient	Frequency	Percent
Spouse/Partner	49	61.3
Parent	6	7.5
Child	13	16.3
Sibling	8	10.0
Other (roommate, other relatives)	4	5.0
TOTAL	80	100.1

The occupations of the family members are presented in Table 14. Only 36 (45%) family members reported that they were employed outside of the home. Retirees made up the largest group of reported occupations (n=28, 35%) but their previous occupations were not requested.

Table 14

Family Member Occupations

Occupation	Frequency	Percent
Retired	28	35.0
Housewife/Homemaker	16	20.0
Service Industry (eg. chef, painter, postal worker, cashier, auto repair, sales)	13	16.3
Secretary/Office Worker	5	6.3
Health Care Worker	5	6.3
Teacher	5	6.3
Student	4	5.0
Self-employed	4	5.0
TOTAL	80	100.2

Family Members' Experiences with Hospitalization and Surgery

The majority of family members reported previous personal experience with hospitalization and surgery. Seventy-two (90%) indicated they themselves had been previously hospitalized and 60 (75%) reported that they themselves had undergone surgical procedures. Seventy-one (88%) reported that they had a close family member who had undergone surgery.

Patient and Family Member Accommodation During and After Patient's Hospitalization

Family members were asked to respond to the question: "Will the patient be staying with you immediately after discharge from the hospital?" Sixty-one (76.3%) of the family members stated that the patient would be staying with them immediately following discharge.

The family members were also asked to indicate whether or not they were staying in their own homes during the patient's hospitalization. Seventy-one (88.8%) of them stated they were able to stay in their own home during the patient's hospitalization.

Findings

The findings of this research will be presented in relation to each of the research questions. Descriptive statistics were used to describe the importance of needs and the degree to which needs were met. Independent t-tests were used to analyze the differences in total and subscale mean scores between men and women and between spouses and non-spouses. The Pearson Product Moment Correlation statistic was used to determine the relationship between need importance and the age of patient and the age of the family member.

Research Question 1: The Importance of the Needs Identified by Family Members

In order to describe the importance of needs identified by family members, the frequency and distribution of responses and mean scores for each of the 62 items were calculated and examined. Mean scores for each of the nine subscales, which had been based on the nine categories of basic human needs in the UBC Model for Nursing (Campbell, 1987), were also computed and examined. All items and the nine subscales were further examined according to rank order by mean scores. In addition, the total scores for each subject were computed and examined. Family member total scores and item mean scores were calculated based on the following values: Not Important (1); Slightly Important (2); Important (3); and Very Important (4).

The distribution of total scores for family members will be presented first. The frequency and distribution of responses and mean scores for each of the 62 items will then be presented followed by the rank ordering of the 62 items by mean score. Lastly, the

descriptive statistics and rank ordering by mean score of the nine subscales will be presented.

Table 15 presents the distribution of scores. The family members' total scores on the MSFNI ranged from a low of 90 to a high of 236 ($M=182.6$, $SD=31.1$, $Median=188$).

Table 15

Distribution of Family Members' Scores

Total Score ^a	Frequency	Percent
239 - 210 (high need)	16	20.0
209 - 180	32	40.0
179 - 150 (moderate need)	19	23.8
149 - 120	10	12.5
119 - 90 (low need)	3	3.8
TOTAL	80	100.1

Note. ^a62 items scored from 1 to 4. Minimum score possible was 62 and maximum score possible was 248.

The frequency and percentage distribution of family members' responses to the importance of each item and the item mean scores were calculated and displayed in tabular form (Appendix E). With the exception of one item (#5), family members chose from the full range of possible importance categories. In the case of item number five, no family members felt that the need "to have questions answered honestly" was "Not Important". All items were considered by at least 6 (7.5%) subjects to be "Very Important". Nineteen of the items were viewed as "Very Important" by at least 40 (50%) of the family members. Only three of the items were viewed as "Not Important" by more than 40 (50%) of the family members. Fifty of the 62 items were considered by at least 40 (50%) of the family members

to be either "Important" or "Very Important".

Table 16 presents the distribution of item mean scores. Item means ranged from a low of 1.70 to a high of 3.87. Sixteen (25.8%) of the items had mean scores of 3.50 or greater.

Table 16

Distribution of Item Mean Scores

Item Mean	f (%)
3.75 - 4.00	3 (4.8)
3.50 - 3.74	13 (21.0)
3.25 - 3.49	4 (6.5)
3.00 - 3.24	8 (12.9)
2.75 - 2.99	10 (16.1)
2.50 - 2.74	10 (16.1)
2.25 - 2.49	6 (9.7)
2.00 - 2.24	4 (6.5)
1.75 - 1.99	3 (4.8)
1.50 - 1.74	1 (1.6)
TOTAL	62 (100)

To identify the relative importance to family members of individual needs the 62 items were rank ordered by item mean scores and labelled with the categories of needs of the UBC Model for Nursing (Campbell, 1987). Table 17 presents all 62 items ranked from highest to lowest by mean score and indicates in which of the nine subscales the item was included as determined by which of the nine need categories was primarily reflected by each item. Table 17 further indicates which of the nine need categories was considered to be a secondary

focus. Of the 20 most important needs, 14 were categorized primarily as needs for safety and security and 4 were categorized primarily as needs for mastery. Of the 14 categorized primarily as needs for safety and security, nine were secondarily categorized as needs for mastery. Of the 10 least important needs, 6 were categorized primarily as needs for love, belongingness and dependence. With the exception of the need for stimulation of the senses, all need categories were represented, in no specific pattern, by the 32 middle-ranked items.

Table 17

Rank Ordering by Mean Score of All Items with Subscale Labels Indicated

Rank	Item #	Item	Mean	Subscale Label ^a
1	5.	Questions answered honestly	3.87	Safe/Sec (Mast)
2	17.	Assured best care given	3.81	Safe/Sec
3	43.	Feel personnel care about the patient	3.76	Safe/Sec
4	1.	Know expected outcome	3.72	Safe/Sec (Mast)
5	36.	Understandable explanations	3.72	Safe/Sec (Mast)
6	49.	Inform: to help patient <u>physically</u> at home	3.71	Mast
7	14.	Feel there is hope	3.71	Safe/Sec
8	56.	Know what to expect day of surgery	3.71	Safe/Sec (Mast)
9	44.	Know facts re: patient's progress	3.65	Safe/Sec (Mast)
10	45.	See the patient frequently	3.64	LBD (Safe/Sec)
11	41.	Called at home about changes in condition	3.64	Safe/Sec (LBD)
12	19.	Know what being done for patient	3.60	Safe/Sec (Mast)
13	50.	Inform: to help patient <u>emotionally</u> at home	3.59	Mast (LBD)
14	16.	Know how patient treated medically	3.57	Safe/Sec (Mast)
15	13.	Know why things done	3.55	Safe/Sec (Mast)
16	57.	Speak to surgeon right after surgery	3.55	Safe/Sec (Respect)
17	48.	Inform: to help patient <u>emotionally</u> in hospital	3.40	Mast (LBD)
18	40.	Told about discharge plans	3.36	LBD (Respect)
19.	42.	Receive information once a day	3.28	Safe/Sec(Mast;Respect)
20.	47.	Inform: to help patient <u>physically</u> in hospital	3.26	Mast

Table 17 (continued)

Rank	Item #	Item	Mean	Subscale Label ^a
21	58.	Nurse to answer questions after talk to surgeon	3.23	Safe/Sec (Mast;Respect)
22	2.	Explain what to expect before seeing patient	3.17	Safe/Sec
23	21.	Feel accepted by staff	3.16	Respect
24	8.	Good food available	3.14	Food/Fld
25	33.	Bathroom nearby	3.13	Waste
26	37.	Visiting hours on time	3.08	Respect (LBD;Safe/Sec)
27	53.	Get rest for myself	3.05	Energy (Respect)
28	54.	Follow eating habits	3.00	Food/Fld (Respect)
29	15.	Know type of staff caring for patient	2.97	Safe/Sec (Mast)
30	11.	Know which staff could give what information	2.96	Mast (Safe/Sec)
31	39.	Help with patient's physical care	2.95	Mast (LBD)
32	6.	Visiting hours changed	2.94	LBD (Respect)
33	12.	Friends nearby for support	2.94	LBD (Safe/Sec)
34	62.	Find ways to deal with stress	2.94	Safe/Sec (Respect)
35	46.	Waiting room nearby	2.90	Energy (Respect)
36	7.	Talk about own feelings	2.85	Respect (Safe/Sec)
37	55.	Ensure breathing easy	2.77	Oxygen
38	52.	Attend to routine bowel/bladder patterns	2.75	Waste (Respect)
39	32.	Told re: others to help with problems	2.71	LBD
40	4.	Specific person to call	2.70	Safe/Sec (LBD)
41	51.	Attend to own physical problems	2.70	Respect (Safe/Sec)
42	59.	Take time for exercise	2.69	Respect (Energy;Senses)
43	30.	Talk to a nurse every day	2.65	Safe/Sec
44	31.	Feel it is alright to cry	2.65	Respect (Safe/Sec)
45	23.	Have telephone nearby	2.63	Energy (LBD)
46	28.	Assured alright to leave hospital	2.62	Safe/Sec
47	25.	Talk about patient's possible death	2.61	Respect (Safe/Sec)
48	9.	Directions: what to do at the bedside	2.56	Mast (Safe/Sec)
49	10.	Visit at any time	2.45	LBD (Safe/Sec)
50	3.	Talk to a doctor every day	2.45	Safe/Sec (Respect;LBD)

Table 17 (continued)

Rank	Item #	Item	Mean	Subscale Label ^a
51	20.	Comfortable furniture	2.44	Energy
52	61.	Talk re: impact of patient's illness on me	2.31	Respect
53	35.	Told re: others to help with family problems	2.30	LBD
54	18.	Have place to be alone while in the hospital	2.26	Senses (Respect;Energy)
55	29.	Talk to <u>same</u> nurse everyday	2.20	LBD (Respect; Safe/Sec)
56	24.	Have pastor visit	2.15	LBD
57	34.	Be alone at any time	2.08	Senses (Respect;Energy)
58	22.	Someone to help with financial problems	2.07	LBD
59	27.	Someone concerned about my health	1.94	Respect (LBD)
60	38.	Told re: chaplain services	1.84	LBD
61	60.	Physical assistance to get to room	1.81	Energy (Safe/Sec;Oxy)
62	26.	Person with me when visiting	1.70	LBD (respect;Safe/Sec)

Note: ^aSubscale label based on UBC Model for Nursing need categories (Campbell, 1987).

Primary category of item indicated first. Secondary category of item in brackets.

Safe/Sec=safety and security; Mast=mastery; LBD=love, belongingness and dependence; Respect=respect of self by self and others; Food/Fld=intake of food and fluid, nourishment; Waste=collection and removal of accumulated wastes; Energy=balance between production and utilization of energy; Oxygen=intake of oxygen; Senses=stimulation of the senses.

In order to determine the relative importance of the nine categories of needs, which were created based on the primary focus of each item relative to the nine categories of needs in the UBC Model for Nursing (Campbell, 1987), descriptive statistics were calculated. Appendix F presents the nine subscales and lists the items included in each subscale along with each item's mean score. Table 18 presents the nine subscales in rank order by mean score and provides the subscale mean score along with the range and standard deviation of subjects' subscale mean scores.

Table 18

Rank Order of Subscales by Subscale Mean Score

Rank	Subscale ^a	# of Items ^b	Mean	Range ^c	SD
1	Safety and security	22	3.36	1.55-4.00	.49
2	Mastery	7	3.21	1.00-4.00	.59
3	Intake of food/fluid; nourishment	2	3.07	1.00-4.00	.86
4	Collection and removal of wastes	2	2.94	1.00-4.00	.91
5	Intake of oxygen	1	2.77	1.00-4.00	1.16
6	Respect of self by self and others	9	2.67	1.00-3.89	.70
7	Balance production/utilization of energy	5	2.56	1.00-3.80	.64
8	Love, belongingness and dependence	12	2.53	1.25-3.58	.56
9	Stimulation of the senses	2	2.17	1.00-4.00	.95

Note. ^aSubscales based on UBC Model for Nursing nine need categories (Campbell, 1987).

^bNumber of items in each subscale. ^cRange of subject subscale mean scores; minimum mean score = 1.00 and maximum mean score = 4.00; n=80.

Question 63 invited family members to list any other needs that they felt they had and to indicate whether or not these additional needs had been met. Only nine family members added further comments relative to needs. Content analysis revealed that comments could be grouped under four categories. The first category related to parking facilities and two family members indicated that a need for adequate parking facilities was not met. The second category related to the availability of affordable accommodations in close proximity to the hospital. Three family members indicated that there needed to be affordable accommodation

available, and there needed to be a list of such accommodations, for family members from out of town. The third category referred to the availability of counselling for family members. One family member indicated that knowing how to find assistance for family members not able to deal with bad news was very important and that this need was not met. The fourth category related to the need for adequate information and explanations. Three family members, while not identifying any additional needs, reinforced their responses to other items in the questionnaire and emphasized the need for more thorough explanations and more complete information from both nurses and physicians.

Research Question 2: The Extent Identified Needs Were Met

To identify the degree to which family members' needs were being met, cross tabulations of the degree of importance (scale of 1 to 4) by the degree the need was met (scale of 1 to 3) were computed for each item. Many of the respondents who had indicated that an item was either "Not Important" or "Slightly Important" neglected to complete the three-point scale indicating the degree to which the need was met ($n=1$ to 22 respondents, depending on the item). Because of the missing responses, the degree to which needs were met was examined only for those respondents who had indicated that the need was "Important" or "Very Important". Table 19 presents, in rank order by mean score of importance, all 62 items and the degree to which each need was met for those respondents who had indicated that the need was either "Important" or "Very Important". In general, family members felt that many of their needs were at least "Partly Met". Of the 22 most important needs, many were either "Fully Met" or "Partly Met" for many of the family members. However, only seven of the most important needs were viewed as "Fully Met" by at least 50% of the family members. Further, some of the most important needs were seen as "Not Met" by at least 25% of the family members.

Table 19

Degree Need was Met for Family Members Rating Item as Important or Very Important

Item ^a	Number Rating Item Not or Slightly Important	Number Rating Item as Important or Very Important Recorded by Degree Need Met				Total ^b
		Not Met	Partly Met	Fully Met	No Answer	
5. Questions answered honestly	1	6	14	57	2	79
17. Assured best care given	3	3	29	43	2	77
43. Feel personnel care about patient	4	3	24	45	4	76
1. Know expected outcome	4	4	29	41	2	76
36. Understandable explanations	4	10	22	36	8	76
49. Inform: to help patient <u>physically</u> at home	4	24	19	23	10	76
14. Feel there is hope	5	2	18	49	6	75
56. Know what to expect day of surgery	3	15	21	36	5	77
44. Know facts re: patient's progress	6	15	24	29	6	74
45. See the patient frequently	5	1	13	58	3	75
41. Called about changes in condition	6	22	17	22	13	74
19. Know what being done for patient	6	11	26	32	5	74
50. Inform: to help patient <u>emotionally</u> at home	6	31	20	14	9	74
16. Know how patient treated medically	5	13	27	33	2	75
13. Know why things done	4	12	30	28	6	76
57. Speak to surgeon right after surgery	9	23	7	38	3	71
48. Inform: to help patient <u>emotionally</u> in hospital	10	31	14	20	5	70
40. Told about discharge plans	10	15	19	28	8	70
42. Receive information once a day	13	22	15	23	7	67
47. Inform: to help patient <u>physically</u> in hospital	13	22	20	22	3	67
58. Nurse answer question after surgeon	14	23	17	20	6	66
2. Explain what to expect before seeing patient	19	16	20	23	2	61
21. Feel accepted by staff	13	3	16	47	1	67

Table 19 (continued)

Item ^a	Number Rating Item Not or Slightly Important	Number Rating Item as Important or Very Important Recorded by Degree Need Met				Total ^b
		Not Met	Partly Met	Fully Met	No Answer	
8. Good food available	19	19	23	15	15	61
33. Bathroom nearby	19	1	8	47	5	61
37. Visiting hours on time	17	1	5	54	3	63
53. Get rest for myself	22	5	19	27	7	58
54. Follow eating habits	22	6	20	26	6	58
15. Know type of staff caring for patient	20	14	17	23	6	60
11. Know which staff could give what information	21	18	15	22	4	59
39. Help with patient's physical care	20	4	21	30	5	60
6. Visiting hours changed	21	13	16	25	5	59
12. Friends nearby for support	22	8	9	39	2	58
62. Find ways to deal with stress	25	16	16	14	9	55
46. Waiting room nearby	27	2	6	43	2	53
7. Talk about own feelings	26	14	21	15	4	54
55. Ensure breathing easy	24	6	13	30	7	56
52. Attend to routine bowel/bladder patterns	26	4	13	27	10	54
32. Told re: others to help with problems	29	18	12	17	4	51
4. Specific person to call	29	12	10	28	1	51
51. Attend to own physical problems	31	7	16	19	7	49
59. Take time for exercise	34	7	16	19	4	46
30. Talk to a nurse every day	33	4	18	23	2	47
31. Feel it is alright to cry	31	7	9	27	6	49
23. Have telephone nearby	29	7	14	27	3	51
28. Assured alright to leave hospital	28	2	20	28	2	52
25. Talk about patient's possible death	32	25	5	12	6	48
9. Directions: what to do at bedside	34	10	21	12	3	46
10. Visit at any time	38	11	14	14	3	42
3. Talk to doctor every day	45	11	13	9	2	35
20. Comfortable furniture available	42	9	14	13	2	38

Table 19 (continued)

Item ^a	Number Rating Item Not or Slightly Important	Number Rating Item as Important or Very Important Recorded by Degree Need Met				Total ^b
		Not Met	Partly Met	Fully Met	No Answer	
61. Talk re: impact of patient's illness on me	43	14	9	10	4	37
35. Told re: others to help with family problems	41	17	5	13	4	39
18. Have place to be alone while in the hospital	46	9	13	10	2	34
29. Talk to <u>same</u> nurse everyday	37	11	11	10	1	33
24. Have pastor visit	52	2	5	19	2	28
34. Be alone at any time	51	3	9	16	1	29
22. Someone to help with financial problems	53	11	4	9	3	27
27. Someone concerned about my health	55	6	5	12	2	25
38. Told re: chaplain services	57	7	5	11	0	23
60. Physical assistance to get to room	54	5	4	15	2	26
26. Person with me when visiting	60	1	2	16	1	20

Note. ^aItems listed in rank order according to item mean score. ^bTotal number of subjects indicating need was Important or Very Important.

Research Question 3: Relationship Between Age of Patient, Age of Family Member and Importance of Needs

The Pearson Product Moment Correlation Coefficient was used to describe the relationship between the age of the subject and the importance of needs for subjects and the age of the patient and the importance of needs for subjects as expressed in the total mean importance score and the subscale mean importance scores.

Table 20 presents the subscale and total mean scores by family member age category and the Pearson r statistic for each subscale and the total mean score. There were significant positive correlations between the family member age and the need for collection and removal of accumulated wastes and the need for intake of oxygen. These correlations ranged from $r = .19$ to $r = .32$.

Table 20

Subscale Mean Scores and Pearson Correlation for Family Member Age Categories

Subscale ^a	Subject Age Categories							r^b
	20-29	30-39	40-49	50-59	60-69	70-79	> 79	
	Mean Importance Scores for Subscales							
Safety and Security	2.9	3.5	3.4	3.4	3.5	3.2	2.8	-.05
Mastery	3.0	3.2	3.3	3.3	3.3	3.1	2.3	-.13
Intake of food/fluid	2.9	3.1	3.0	3.1	3.1	3.2	2.8	.05
Collection/removal of wastes	2.0	2.6	2.6	3.0	3.2	3.3	2.8	.32*
Intake of oxygen	2.5	2.6	2.3	2.9	3.0	2.9	3.0	.19*
Respect of self	2.4	2.6	2.6	2.8	2.8	2.5	2.3	.02
Balance: production/utilization energy	2.4	2.3	2.5	2.6	2.7	2.6	2.1	.07
Love, belongingness, dependence	2.4	2.6	2.6	2.4	2.7	2.3	2.7	-.01
Stimulation of senses	1.8	2.6	2.3	2.0	2.2	2.1	2.0	-.04
Total Importance	2.6	3.0	3.0	3.0	3.1	2.8	2.6	.00

Note. ^aSubscales rank ordered by mean score. ^b r =Pearson Product Moment

Correlation. *Significant at 0.05 level of significance.

Table 21 presents the subscale and total mean scores by patient age category and the Pearson r statistic for each subscale and the total mean score. There was a significant negative correlation between patient age and family members' total need importance score ($r = -.19$, $p = .05$). In addition, there were significant negative correlations between patient age and the importance of the family members' needs for: safety and security; mastery;

Table 21

Subscale Mean Scores and Pearson Correlation for Patient Age Categories

Subscale ^a	Patient Age Categories								r ^b
	<20	20-29	30-39	40-49	50-59	60-69	70-79	>79	
Mean Importance Scores for Subscales									
Safety and Security	3.6	3.7	3.4	3.6	3.3	3.3	3.3	2.9	-.21*
Mastery	3.9	3.6	3.2	3.5	3.2	3.2	3.0	2.6	-.23*
Intake of food/fluid	3.0	3.2	2.9	3.3	3.1	3.0	3.1	4.0	.04
Collection/removal of wastes	2.5	3.2	2.7	3.1	2.9	3.0	3.0	3.5	.07
Intake of oxygen	3.0	3.3	2.2	3.0	2.9	2.8	2.6	3.0	-.05
Respect of self	3.7	3.2	2.4	3.1	2.8	2.6	2.4	2.7	-.20*
Balance: production/ utilization energy	2.8	2.9	2.1	2.9	2.7	2.6	2.5	2.4	-.03
Love, belongingness, dependence	3.2	2.8	2.5	2.7	2.5	2.5	2.4	2.8	-.15
Stimulation of senses	2.0	2.8	2.5	2.7	2.0	2.0	2.0	3.0	-.20*
Total Importance	3.4	3.3	2.9	3.2	2.9	2.9	2.8	2.8	-.19*

Note. ^aSubscales rank ordered by mean score. ^b r =Pearson Product Moment Correlation.

^cSignificant at 0.05 level of significance.

respect of self by self and others; and stimulation of the senses. These correlations ranged from $r = -.20$ to $r = -.23$. The younger the patient, the greater was the family members' desire for satisfaction in these need categories.

Research Question 4: Difference in Importance of Needs between Males and Females and between Spouses and Non-spouses

In order to determine if there was any difference in importance of needs between males and females and between spouses and non-spouses, independent t-tests were performed and the rank ordering of the top 20 and bottom 15 needs for each grouping of family members were examined and compared.

With respect to differences between males and females, the results of t-tests (Appendix H) indicated that there was no significant difference, between males and females, in the mean scores for total importance ($t = -1.49$, $p = .14$) nor in the mean scores for any of the nine need categories. However, t values were negative for all calculations demonstrating a tendency for males to rate many of the needs less importantly than females. The female group rated 34 of the items with a mean value of 3.00 or greater whereas the male group rated only 24 of the items with a mean value of 3.00 or greater .

A comparison of the rank ordering of the top 20 needs for each group revealed that males and females included exactly the same needs in their top twenty needs, although they were in somewhat different order. The need to have questions answered honestly was considered by both males and females to be their most important need. Males ranked the need to feel there is hope as third whereas females ranked the need as tenth. A comparison of the rank ordering of the least important needs for males and females revealed that 12 of the 15 least important needs were the same for both groups.

When the overall ranking of all items for both males and females was examined, several

instances of substantive differences in the rank of individual items by each group were noted. Table 22 presents the nine items which ranked with a difference of eight or more positions. Only one of the differently ranked items (#50) was from the list of 20 most important needs. However, while males ranked five needs substantively more important than females, t-tests on the differences in mean scores for those items demonstrated a statistically significant difference, at the .05 level of significance, for only item #3 which was related to talking to the doctor every day ($t=1.84$). Of the four items ranked substantively more important by females, t-tests on the differences in mean scores demonstrated a statistically significant difference for three of the items: #9, related to having directions as to what to do at the bedside ($t=1.75$); #31, related to feeling it is alright to cry ($t=2.38$); and #32, relating to being told about others to help with problems ($t=1.88$).

Table 22

Items Ranked Substantively Different by Males and Females

Item	Mean (Rank ^a)	
	Males	Females
3. Talk to doctor every day	*2.58 (43)	*2.39 (51)
9. Directions: what to do at the bedside	*2.23 (52)	*2.72 (43)
10. Visit at any time	2.58 (42)	2.39 (52)
11. Know which staff could give what information	2.69 (37)	3.09 (28)
25. Talk about patient's possible death	2.69 (35)	2.57 (48)
31. Feel it is alright to cry	*2.23 (51)	*2.85 (38)
32. Told re: others to help with problems	*2.38 (47)	*2.87 (37)
50. Inform: how to help patient <u>emotionally</u> at home	3.69 (4)	3.54 (16)
51. Attend to own physical problems	2.81 (31)	2.65 (47)

Note. ^aRank ordered by item mean score; 1 = most important and 62 = least

important. *Differences in mean scores significant at .05 level of significance.

With respect to the differences between spouses and non-spouses, the results of t-tests (Appendix G) indicated that there was no significant difference in the mean scores for total importance ($t=1.48$, $p=.143$) and in all but two of the nine need categories. Spouses indicated a significantly higher importance for the need for collection and removal of wastes ($t=2.07$, $p=.042$) and for the need for balance in the production and utilization of energy ($t=2.12$, $p=.037$).

A comparison of the rank ordering of the top 20 needs for the spousal and non-spousal groups revealed that the two groups included 19 of the same needs in their top 20 needs, although they were ranked in a somewhat different order. To have questions answered honestly was the most important need for both groups. A comparison of the rank ordering 15 least important needs for each group revealed that, with the exception of one need, both groups included the same needs although they were in a slightly different order. Non-spouses viewed the need for assurance that it was alright to leave the hospital less important ($M=2.35$, rank of 50) than spouses ($M=2.80$, rank of 40).

When the overall ranking of all items by both spouses and non-spouses was examined, several instances of substantive differences in the rank of individual items by each group was noted. Table 23 presents the 11 items which ranked with a difference of eight or more positions. Only two of the differently ranked items were from the list of 20 most important needs. Spouses ranked seven items substantively more important than non-spouses. Of these seven items, t-tests demonstrated a significant difference in the mean scores for six of the items: #1, know the expected outcome ($t=1.74$); #28, assured it is alright to leave hospital ($t=1.88$); #33, have a bathroom nearby ($t=1.75$); #46, have a waiting room nearby ($t=1.88$); #52, attend to routine bowel/bladder patterns ($t=1.69$); and #57, speak to the surgeon after surgery ($t=2.35$). While non-spouses ranked 4 needs substantively more

important than spouses, t-tests demonstrated that none of the differences in mean scores were statistically significant.

Table 23

Items Ranked Substantively Different by Spouses and Non-Spouses

Item	Mean (Rank ^a)	
	Spouses	Non-spouses
1. Know the expected outcome	*3.84 (3)	*3.55 (12)
4. Have a specific person to call at hospital	2.65 (47)	2.77 (35)
6. Visiting hours changed	2.92 (34)	2.97 (26)
7. Talk about own feelings	2.80 (39)	2.94 (28)
8. Have good food available at hospital	*3.29 (22)	*2.90 (31)
11. Know which staff could give what information	2.86 (37)	3.13 (23)
28. Assured it's alright to leave hospital	*2.80 (40)	*2.35 (50)
33. Have a bathroom nearby	*3.29 (21)	*2.87 (31)
46. Have a waiting room nearby	*3.08 (27)	*2.61 (39)
52. Attend to routine bowel/bladder patterns	*2.92 (35)	*2.48 (45)
57. Speak to the surgeon right after surgery	*3.73 (5)	*3.26 (18)

Note. ^aRank ordered by item mean score; 1 = most important and 62 = least

important. *Differences in mean scores significant at .05 level of significance.

Discussion

The discussion of the results is organized under the following headings: characteristics of the sample; importance of needs; the extent to which needs were met; relationship between age and importance of needs; and differences in importance of needs relative to gender and relationship to patient. The results will be discussed in relation to the theoretical framework, other research studies and methodological problems inherent in the study.

Characteristics of the Sample

Two aspects of sample characteristics will be addressed. Firstly, the characteristics of

the patients whose family members participated in the study will be discussed. Secondly, the characteristics of the sample of family members will be discussed.

Characteristics of the Patients

Some statistics regarding age and gender of, and surgical procedures performed on, surgical patients have been reported (British Columbia Ministry of Health, 1993; Health Medical Records Institute, 1994). However, because none of the statistics were reported in a format that took into account the specific criteria for inclusion of patients in this study, establishing representativeness of the study group was difficult.

The mean age of patients in this study was 59.09 with a range of 19 to 83 years and with an age distribution as follows: 20 to 49 years, 23%; 50 to 64 years, 38%; and 65 years and over, 38%. Hospital statistics, however, reported the following age category distribution for all patients admitted to the surgical units during the period of data collection for this study: 20 to 49 years, 35.7%; 50 to 64 years, 24.2%; and 65 years and over, 40.1% (Health Medical Records Institute, 1994). The apparent higher age of the patients in this study as compared to hospital statistics and to the one study reporting patient mean age at 50.7 years (Bethel, 1981) could possibly be accounted for by two factors. Firstly, 20% of the population in the region served by the hospital is 65 years of age or over, as compared to 13% of the provincial and national populations (British Columbia Ministry of Health, 1993). Secondly, the average length of hospital stay, depending on the type of surgery, for the 20 to 49 year category ranges from 2.8 to 5.8 days, which is substantively lower than for the older age categories which average 6.1 to 25.1 days. Consequently, many of the younger patients may have been discharged before they had met the inclusion criteria of three days of post-operative hospitalization. Therefore, with respect to the age of patients, the patient group would appear to be reasonably representative of patients who had undergone major surgery

during the period of data collection and were hospitalized for at least three days post-operatively.

Since no hospital statistics were available with which to compare the patients in this study, it is difficult to establish the representativeness of the patient group with respect to gender. However, provincial statistics indicate that the population of the hospital region comprises 48% males and 52% females (British Columbia Ministry of Health, 1994). Since the patient group in this study comprised 44% males and 56% females, it appears that the patient group was reasonably representative of the general population in the hospital region with respect to gender. The gender proportions of the patient group were consistent with one other study investigating the needs of spouses of surgical patients (Bethel, 1981).

The surgical procedures performed on the patients in this study involved major surgery on the gastro-intestinal/biliary tract, and the musculo-skeletal, urinary, pulmonary, vascular and female reproductive systems with 22 (32.5%) cases related to a diagnoses of cancer. As planned, these surgeries were of a more major nature and of a broader variety than in other studies identifying the needs of spouses of surgical patients (Bethel, 1981; Silva, 1987).

Hospital statistics that were available with which to compare the patient group with respect to types of major surgery and diagnoses of malignancy did not take into account the specific selection criteria for this study (Health Medical Records Institute, 1994). Thus, it is difficult to establish the representativeness of the patient group in terms of surgery performed.

However, with one exception (ie. vascular system), the surgeries performed on the patients in this study appeared to be reasonably representative of the types and numbers of major surgeries, within the specified classifications, performed in the hospital during the data collection period and requiring three or more days of post-operative hospitalization.

Characteristics of the Family Members

The overall response rate of 67.5% represents a good rate, considering the questionnaire was returned voluntarily. According to Polit and Hungler (1991), a response rate greater than 60% is sufficient to prevent the risk of serious response bias. Therefore, there does not appear to have been a risk of serious response bias in this study.

No statistics regarding family member ages were available with which to compare this study's sample. Other studies that investigated the needs of family members of surgical patients, reported mean ages substantively lower than in this study. Bethel (1981) reported a mean age of 49.9, Silva (1987) a mean age of 50.1 and Carmody, Hickey and Bookbinder (1991) reported a mean age of 45.6. While family members in this study had a similar range of ages (20 to 92 years), they were generally older with a mean age of 56.04 and with 33.8% in the 65 years of age or older category. These age statistics are consistent with the high mean age of the patients in this study ($M=59.1$), particularly when considering the fact that 61.3% of family members were spouses or life partners and that a large number of the sample were retired. While there is only limited evidence, the sample in this study appears to be reasonably representative of the population of family members from which it was drawn with respect to age.

No statistics were available with which to compare the family members' occupations. In this study, only 45% of the sample reported working outside of the home, with half of those working in service industries or office worker positions. The fact that the largest single occupational group was retirees (35%) is consistent with the high mean age of the sample ($M=56.04$) and the large percentage of the sample being 65 years of age or older (33.75%). Therefore, while there is only limited evidence, it appears that this sample is reasonably representative with respect to occupation.

With respect to relationship to the patient, 61.3% of the sample in this study were spouses or life partners. This proportion of spouses differed from other studies that investigated only spousal needs (Bethel, 1981; Silva, 1987) or that had samples that contained fewer spouses (Carmody, Hickey and Bookbinder, 1991; Leske, 1991a). As no statistics were available with which to compare family members' relationships to patients, it was difficult to establish the representativeness of the sample in this area. One available statistic shows that, of the total population in the hospital region, 48.4% are married (Statistics Canada, 1991). However, given the high mean age of the patients and the family members in this study, a larger proportion of spouses could be anticipated. Further, the selection criteria for this study excluded all people under the age of 18 and would therefore exclude some of the patient's non-spousal family members. Thus, the sample in this study would appear to be reasonably representative of the population with respect to spousal versus non-spousal relationship. However, it is interesting to note that the response rate for spouses was 72.5% as compared to 60.8% for non-spouses. While both of these response rates are probably sufficient to avoid the risk of serious response bias within each relationship category, the needs of non-spouses may not necessarily be well represented in the combined data analysis in this study.

The sample in this study comprised 26 males (32.5%) and 54 (67.5%) females. Statistics were not available with which to specifically compare the gender of family members in this study. Thus, it is difficult to determine the representativeness of the sample. Given that the general population in the city in which this study was conducted comprised 48.5% males and 51.5% females (British Columbia Ministry of Health, 1994), it would appear that the sample may not be representative in terms of gender. However, this apparent substantive difference in representation by gender could be accounted for, in part, by the

high mean age of the sample and the high percentage of subjects 65 years of age and over. Canadian statistics reveal that as age increases the proportionate number of women also increases (Statistics Canada, 1994). By the age of 70, 55.4% of the population is female and by the age of 75, 57.9% is female. However, the difference in gender representation could also be accounted for by the lower response rate of males (54%) as compared to females (75%) in this study. It may be that the males had either less inclination or less time to complete questionnaires or viewed the reporting of their needs as less important than did the females. With respect to gender, the sample in this study was very similar to that reported by Leske (1991a) but was substantively different than that reported by Bethel (1981) with 47.4% males, Silva (1987) with 61.3% males and Carmody Hickey and Bookbinder (1991) with 42.9% males. The representativeness of the sample in this study with respect to gender is therefore not clear.

The sample of family members in this study reported a considerable amount of experience with hospitalization and surgery, either personal or involving another family member. This considerable experience is consistent with the ages of both the patients and of the family members themselves and with the findings of the only other study that reported the subjects' experiences with surgery (Bethel, 1981).

Summary

In summary, the study sample appears to be reasonably representative of the population of family members of patients hospitalized on general surgical units for at least three days following major surgery at the study site during the period of data collection. Reasonable representativeness of the patient group with respect to age, gender and surgical procedures was established. While representativeness of the family member sample was not established with respect to gender, the sample appears to be reasonably representative with respect to

age, relationship to patient and occupation.

Importance of Needs

In the discussion to follow, the needs of, and the importance of needs to, adult family members of adult major surgery patients hospitalized on general surgical units in this study are discussed. The conceptual framework and findings reported in the literature are related to the importance of needs and need categories to family members. In addition, the instrument used to identify the importance of the needs (MSFNI) is discussed in terms of reliability and difficulties inherent in its use.

Level and Variability of Need Importance

The sample of family members in this study indicated moderately high to high levels of need importance with a mean total importance score of 182.6 and with 44 family members (55%) scoring above the mean. Only 13 (16.3%) scored in the moderately low or low range of scores (90 to 149). The high variability in the scores (Range=90 to 236; SD=31.3), demonstrated that different family members perceived different overall levels of need importance. This high, though variable, level of need importance could be attributed to a combination of several factors: the generally high, although varying, severity of the patient's illness and surgery; the large number of surgeries related to malignancies; the high mean age of both the patient and the family members; and the high proportion, though not all, of the sample having a spousal relationship to the patient.

Only one other researcher reported the subjects' total scores and the majority of subjects in that study also indicated a high level of need importance (Bethel, 1981). A direct comparison with Bethel's study could not be made because she used a considerably different instrument and sample. However, when the different number of items in the two instruments were accounted for it became apparent that subjects in both studies had perceived exactly the

same level of need importance with group mean scores of 2.95. Although the patients in Bethel's study had undergone surgery of a much less major nature than patients in this study, the fact that all of her family members were spouses might account for the similarity in high level of need importance between the two studies.

The data in this study revealed that different family members viewed the importance of a particular need differently. These differences were evident in the frequency distribution of responses to the importance of each item which demonstrated that, with the exception of one item, family members chose from the full range of possible choices relative to importance. The responses on all returned instruments also clearly demonstrated that each family member differentiated amongst the needs with respect to importance and did not answer with a particular response set. Variability in family members' perceived importance of the different needs was also demonstrated by the distribution of item mean scores which ranged from a low of 1.70 to a high of 3.87. The apparent variability in the perceived importance of different needs by family members in this study is consistent with findings in other studies. Two other studies that investigated the needs of spouses of surgical patients but used a different instrument both reported a similar wide range of item mean scores (Bethel, 1981; Silva, 1987). More importantly, though, a quantitative analysis of studies which had used the unmodified CCFNI to identify needs of family members of ICU patients revealed the same degree of variability amongst importance of items, with the same maximum item mean score ($M=3.87$) but a somewhat higher minimum item mean score (Leske, 1992b). Thus, the general surgery family members in this study, who responded to an instrument very similar to the CCFNI, apparently had a high and variable level of need importance very similar to that perceived by family members of ICU patients.

The apparent variability in importance of needs to the family members in this study is

consistent with the conceptual framework used for the study. The UBC Model for Nursing (Campbell, 1987), while stating that all needs are operative at all times and not organized in a hierarchy, supports the view that individuals may perceive some needs to be more important to satisfy than other needs during a given period of time. The model also supports the view that one individual may differ from another in his or her view of the importance of satisfying a particular need in a similar situation. The family members in this study clearly discriminated between those needs that were more important and those that were not important for them, as individuals, to satisfy during the unpredictable event of the patient's hospitalization.

Relative Importance of Needs and Need Categories

In order to determine the relative importance of the needs, the items were rank ordered according to item mean score. Mean scores for each of the nine subscales derived from the UBC Model for Nursing (Campbell, 1987) were also calculated and these nine need categories were also rank ordered according to mean scores. The rank ordering of the items revealed some clearly identifiable patterns in the types of needs that family members in this study perceived as both most important and less important. The 22 most important needs and their corresponding need categories will be discussed first. The less important needs and need categories will then be discussed followed by an overall comparison of the results of this study with findings in the literature.

Thirteen of the 22 most important needs, including the most important need "to have questions answered honestly", all related to family members' need to have information. Those information needs related specifically to having: understandable explanations; timely information about the patient's illness and surgery and their expected outcomes; knowledge of what to expect on the day of surgery and when seeing the patient for the first time post-

operatively; and up-to-date information about the patient's treatment and progress throughout the period of hospitalization. Three more of the most important needs related to the need to feel there was hope for the patient's recovery and to be assured that the patient was receiving the best possible care from caring personnel. All 16 of these needs were categorized primarily as needs for physical safety and emotional security. Indeed, the fact that the safety and security subscale ranked first of all nine subscales implied that family members viewed their basic need for safety and security as the most important at this time. The specific items in this included in this category seemed to indicate that the need for safety and security was most particularly related to the desire for relief from fear and anxiety regarding the welfare of the patient and to the corresponding need to acquire information to decrease fear and anxiety.

When all items in the need category of safety and security were examined an interesting pattern of findings became evident. While it was very apparent that family members wanted a great deal of information and wanted that information to be current, it was also evident that family members did not see the nurse as an important source of that information. The need to talk to a nurse every day ranked a low 43rd and the need to talk to the same nurse every day ranked an even lower 55th. These findings, combined with the fact that having a nurse available to answer questions after the family member talked to the surgeon following surgery was seen as very important leads this investigator to one conclusion: that patients and family members continue to perceive that doctors are the important, if not only, source of information and that the nurse's role is primarily to clarify what the doctor has said.

The need to feel there was hope, also included in the safety and security subscale, emerged as very important in this study. This finding is not consistent with the findings of Bethel's (1981) nor Silva's (1987) studies in which the need to feel there was hope did not

emerge as a need for spouses of surgical patients. However, this finding is consistent with the findings in other studies that investigated the needs of family members of patients in ICU (Leske, 1986, 1991b; Molter, 1976) and the needs of family members of patients in the operating room undergoing surgery for cancer (Carmody, Hickey & Bookbinder, 1991). The very high degree of importance of the need for hope in this study was not anticipated because the patients were hospitalized on general surgery units and only 22 had cancer. It appears that, although the patients in this study were hospitalized in non-intensive care units and had done well in surgery, the highly acute level of patient illness and the high patient age may have been the factors that contributed to the importance of the need to feel there was hope.

As a further four of the 22 most important needs demonstrated, family members wanted information that would assist them in helping the patient, both physically and emotionally, not only after discharge but also during the patient's hospitalization. These four needs were included in the category of the need for mastery which ranked second overall in importance with a mean score of 3.21. The apparent importance of the need for this type of information could be related to the family members' desire to feel a sense of accomplishment within the limits of his or her potential. However, having the information about how to assist the patient may also allow the family members to achieve some sense of power and control in the alien environment of the hospital and during the unpredictable event of the patient's hospitalization.

When all the items in the need for mastery subscale were examined together it was evident that, while family members felt it was very important to have information about how to help the patient physically and emotionally in the hospital, actually helping with the patient's physical care was viewed as a much less important need (Rank=31). While some family members appeared somewhat hesitant to become involved, it is important to note that

75% of the family members still felt it was either Important or Very Important to help with the patient's physical care in the hospital. This desire to assist with the care of the patient is consistent with findings in other studies investigating the needs of spouses of surgical patients (Bethel, 1981; Silva, 1987). Although in this study the acuity of patient illness was considerably higher than in the other studies, and not all subjects were spouses, the need to help with physical care was viewed as important to a much larger proportion of the sample. This increased desire to participate in the care could be explained by the fact that, because of media reports about cost cuts and increased acuity of illness in the hospitals, family members may assume that nurses are too busy to provide all the care that they feel the patient should have. Furthermore, participating in the patient's physical care may well be an important way that family members gain a sense of control in an unfamiliar situation.

It is important to note that ten of the most important needs that were primarily categorized as needs for safety and security were also secondarily categorized as needs for mastery. Not only did family members appear to want information to decrease their fear and anxiety in an attempt to meet their basic need for safety and security, they may have also wanted the same information to assist them in meeting their basic need for mastery. The high degree of importance attributed by family members to both the basic need for mastery category and the basic need for safety and security may be related to the apparent close relationship between the need for information to decrease fear and anxiety and for information to achieve a sense of control and competence.

The last category of needs reflected by the 2 remaining items in the 22 most important needs was the need for love, belongingness and dependence. The high degree of importance of the specific need "to see the patient frequently" could be related to the family members' need to maintain an intimate emotional relationship with the patient during the period of

hospitalization. However, as indicated by the item's secondary categorization, the high degree of importance attributed to the item may also be related to the fact that frequent contact with the patient may also decrease the family member's anxiety and therefore contribute significantly to meeting their need for emotional security. However, overall the need category of love, belongingness and dependence was of low importance (Rank=8; $M=2.53$) and 6 of the family members' 10 least important needs were included in the category. This would appear to indicate that family members placed little importance on meeting their own needs for intimate emotional relationships, for association with others or for dependence on others during the period of the patient's hospitalization. Family members appear to have felt that they must remain strong and independent during the patient's hospitalization and that support and assistance for the patient was of much more importance than support and assistance for themselves. However, it is important to note that three of the most important needs were also secondarily categorized as needs for love, belongingness and dependence, lending credence to the continued importance of meeting this basic need during the patient's hospitalization.

It is important to recognize that all of the 22 most important needs reflected family members' needs that related either to assurance that the patient was well cared for and progressing well or to learning how to help the patient both emotionally and physically. It appeared that only after priority importance was given to issues related the patient's welfare did family members identify as important those needs related to their own physiological and psychosocial well-being. As one family member stated: "My needs don't matter much right now but my wife's do".

The categories representing the basic physiological needs for nourishment, for collection and removal of wastes, and for oxygen ranked third, fourth and fifth respectively. The

categories representing the physiological needs for balance in production and utilization of energy and for stimulation of the senses ranked lower in importance. However, some of the specific physiological needs were considered to be relatively important, including having good food available, following regular eating habits, ensuring sufficient rest, and having a waiting room and a washroom close. The relative importance family members placed on these needs was possibly because they viewed maintaining physical wellness and stamina relatively important so that they could meet their more important needs related to helping the patient physically and emotionally both in the hospital and after discharge. Family members appeared to consider the satisfaction of some of the physiological needs more important than the satisfaction of the psychosocial needs for respect and for love, belongingness and dependence. However, family members still viewed the satisfaction of the physiological needs as less important than the satisfaction of their basic needs for safety and security and mastery, both of which related closely to their primary concern for the patient.

The category representing the basic need for respect of self both by self and by others was also of less importance to family members during the patient's hospitalization. All but two of the items categorized in this need category fell in the last half of the rank order of items and the need category itself ranked a sixth. Again it was apparent that the family members viewed concern for their self-esteem and their own self-interest and welfare as less important than assurance about the welfare of the patient. However, the need to feel accepted by the staff was considered to be particularly important. It was apparent family members wished to establish family-staff relationships at least to the level that they felt accepted by the staff. Since the need to talk about their own feelings was also considered as either Important or Very Important for 54 (67.5%) of the family members, a close relationship with, and acceptance by, the staff could be of particular importance to those

family members who did not have an adequate network of social support. Another need in this category that was of significant importance was the need to have visiting hours start on time. While this particular need could contribute to the family members feeling of self-worth, getting to see the patient as early as possible could also help assure the family member of the patient's well being.

It is important to note that, although some needs may seemed to have been quite unimportant because they ranked very low as compared to other needs, a substantive number of family members still perceived the lowest ranked needs as either Important or Very Important. In fact, not until an item's rank order dropped below a rank of 50 did the number of family members indicating that the need was either Important or Very Important drop below 40 (50%) of the total sample of 80 family members. Although the need to talk to the same nurse every day was ranked very low (#55), 33 (41.3%) of the family members still considered the need to be Important or Very Important. Even the lowest ranked item, related to having a person accompany them when visiting, was still viewed as either Important or Very Important by 20 (25%) of the family members. It was very evident that most of the needs incorporated into the MSFNI instrument used in this study were considered to be relatively important to a substantive portion of family members sampled. This finding is consistent with the findings in other family needs studies (Bethel, 1981; Carmody, Hickey and Bookbinder, 1991; Leske, 1992a, 1992b; Silva, 1987).

Comparison of Findings with the Literature

Comparing the findings of this study with the findings of other family needs studies was difficult because data collection instruments used in other studies were, in some cases, substantively different in both number and types of items included (Bethel, 1981; Carmody, Hickey & Bookbinder, 1991; Leske, 1991a, 1991b, 1992a, 1992b; Silva, 1987). However,

many marked similarities and some differences were found.

Bethel (1981) and Silva (1987), while both investigating the needs of the spouse during the patient's post-operative hospitalization, limited the variety and the types of surgery to those of a much less major nature than did this study. However, the findings of this study regarding most important needs are very similar to both Bethel's and Silva's findings regarding the most important needs. As in this study, the most important specific needs included: getting honest answers and understandable explanations; being assured that the patient was receiving the best care possible; having knowledge of the patient's progress and being called at home about changes; and being informed about how to help the patient in the hospital. To feel accepted by the staff, to help with the patient's physical care and to talk about their own feelings were also ranked very similarly to this study. Bethel (1981) also found that knowing the expected outcome was of prime importance and that having information as to how to help the patient physically and emotionally after discharge was only marginally less important than in this study. Any further comparison of Bethel's and Silva's findings with the findings of this study are not possible owing to the marked difference in the data collection instruments. However, the findings of this study are consistent with the findings of their studies with respect to some of the most important information and assurance needs of family members. This leads one to hypothesize that the most important needs of most family members may be very similar and that neither the acuity of the patient's illness nor the family member's relationship to the patient may influence which needs are the most important.

Comparison of the findings of this study with a study of the needs of family members during the intra-operative period conducted by Carmody, Hickey and Bookbinder (1991) is also difficult. While the patients were undergoing very similar types of major surgery as

patients in this study, the data collection instrument was different. Their instrument, although adapted from the same original instrument as the MSFNI used in this study, included only 20 of the 45 original items and those items were modified items to relate specifically to the intra-operative period. However, Carmody et al also found that at least 55% of their subjects felt that all 20 of the needs included in the instrument were of very great to extreme importance. These needs were the same as, or very similar to, the 22 most important needs found in this study, including the need to feel there was hope which was ranked almost the same. The investigator in this study was not anticipating this same degree of similarity because the family members in the Carmody et al study were responding to the questionnaire while the patient was still in the operating room for cancer surgery, during which time one might expect a higher level of need importance and different important needs because of the extreme uncertainty of the intra-operative period. However, the degree of similarity between the findings in Carmody et al's study and this study leads one to hypothesize that which needs are most important is not influenced to any great extent by which stage of the perioperative period the patient is experiencing. The similarities in findings between this study and the studies by Bethel (1981), Silva (1987) and Carmody, Hickey and Bookbinder (1991) are remarkable. However, the similarities between the findings in this study and the findings in Leske's (1991a, 1991b, 1992a, 1992b) quantitative analysis of studies identifying ICU family members' needs are even more remarkable given that ICU patients are generally more critically ill and one would therefore anticipate that family needs might be significantly different. The fact that the MSFNI instrument used in this study included all 45 items from the original CCFNI instrument that was used in the studies Leske analyzed facilitated a closer comparison of the findings in respective studies.

When a rank ordering of the importance of needs in this study was compared closely

with the rank ordering of needs in Leske's (1992b) meta-analysis, some marked similarities and some differences became evident. Table G-1 in Appendix G compares the rank ordering of the MSFNI's 62 items in this study and the CCFNI's 45 items as they ranked in Leske's meta-analysis. In both studies the first and second most important needs, to have questions answered honestly and to be assured the best care is given, were the same. In fact, 14 of the 15 highest ranked items in the Leske study are included in the 20 most important needs of this study. Further, if the items that were added to the CCFNI instrument by this investigator for this study (MSFNI) were eliminated, 14 of Leske's highest ranked needs would be included in this study's 15 most important needs, although in a somewhat different order. The only significant difference in the top ranked needs is related to the need to talk to the doctor each day; whereas Leske's family members highly rated this need (#14), the family members in this study did not consider it very important (#50). This difference could most likely be accounted for by the fact that the patients in this study were most likely in a more stable condition and less acutely ill than many of the patients in the intensive care units.

Some of the other apparent differences in rank order of needs may also be attributable to the possible differences in the stability and acuity of the patients' conditions. For example, the surgery family members rated much less importantly than ICU family members those needs related to maintaining ongoing close contact with the patient and the health care staff on the units, such as: having a waiting room and a telephone near-by; being reassured it was alright to leave the hospital; receiving information about the patient at least once a day; having a specific person to call if away from the hospital; being able to visit at any time. It appears that when the patient was less acutely ill, as they probably would be on a surgical unit, the need to remain very close by and alert to all that is happening is

considerably less important.

The surgical family members had, as expected, less need than ICU families to talk about the possibility of the patient's death. The surgical family members, however, had more need to talk about their own feelings about what had happened and to be assured it was alright to cry. On the surgical units they also felt it was more important to feel accepted by the staff, to have good food available and to help with some of the physical care. It appeared that when the patient was less acutely ill and potential for the patient's death was not as great, family members started attending more to their own physical and emotional needs but still remain "on duty" to help the patient.

The least important needs of families in both settings appeared to be very similar as well. The need for support and assistance from others in solving personal, financial or family problems was given low importance in both studies.

The need categories used in this study were different than those used by Leske (1992a). However, Leske reported that the two most important need categories in her analysis were: assurance, suggesting a state of inspiring confidence, security and freedom from doubt; and information, suggesting the need for realistic information. These two categories are very similar to the most important need categories in this study, that being the two categories of the need for safety and security and the need for mastery.

In summary, the findings of this study support many of the findings of other relevant family needs studies. Both the family members in this study and the family members in other studies with different patient groups, had similar important needs particularly in relation to the needs for information, assurance about the welfare of the patient, and for inclusion in the patient's experiences and care. It appears that family members have similar important needs and that these similarities tend to remain constant through different types of surgeries,

different levels of illness acuity and different levels of intensity of patient care.

The Instrument

The Major Surgery Family Needs Inventory (MSFNI) instrument used in this study had an internal consistency alpha coefficient of 0.96 indicating high reliability. This high alpha value provided the evidence that the instrument as a whole was measuring a single attribute, in this case the attribute of needs (Waltz, Strickland and Lenz, 1991). However, as the alpha coefficient is partly a function of the number of items in a scale, the alpha coefficient in this case may have been unduly influenced by the large number of items (62) in the MSFNI.

The alpha coefficients for eight of the nine subscales were calculated and varied considerably from 0.92 to 0.52. An alpha for one subscale could not be calculated as it had only one item. Four of the subscales (mastery, love/belongingness/dependence, respect of self and safety/security) had alpha coefficients of 0.78 or greater, indicating a high level of internal consistency for those subscales. Three of the subscales (energy production/utilization, waste collection/removal and sensory stimulation) had lower alpha coefficients (0.60 to 0.70) but would still be considered to be sufficient for group comparison (Polit & Hungler, 1991). The remaining two subscales (food/fluid [$\alpha=0.52$] and oxygen [no α]) would not be considered to be sufficient for group comparison. It is important to note that there were only two or five items in the subscales with alpha values of 0.70 or less. Since the alpha coefficient is partly a function of the number of items in the scale (Polit and Hungler, 1991; Waltz, Strickland & Lenz, 1991), these low alpha values may be accounted for by the very low number of items in each subscale. It is equally important to note that the safety and security subscale with the highest alpha of 0.92 comprised 22 items. The high alpha for that subscale may be unduly influenced by its large number of items.

None of the subjects, either during the pilot study or later, indicated any difficulty with

the instrument and the reading difficulty level as indicated by a Gunning Fog index of 9.5 was suitable given the demographics of the sample. One subject indicated, however, that "...not many [of the items] in the second row [needs met] applied". Other subjects may have felt the same way as many of those who had indicated that a need was "Not Important" failed to indicate the degree to which the need was met. Perhaps those subjects felt that if the need was "Not Important" then whether the need was met or not met was equally unimportant. In addition, some subjects who indicated that a need was "Important" or "Very Important" also did not indicate the degree to which the need was met. For many of these subjects, it was apparent that they had completed the questionnaire while the patient was still in the hospital and that this was too early in the patient's postoperative recovery for them to judge whether or not some of the needs were met.

For purposes of comparison, the alpha coefficient for that portion of the MSFNI which was composed of the 45 items of the Critical Care Family Needs Inventory (CCFNI) was calculated at 0.93. This high alpha coefficient is consistent with previously reported alpha values for the CCFNI (Leske 1986, 1991b, 1992b) and supports the reliability of the CCFNI in its use with a non-critical care population of subjects. However, the alpha coefficient may also have been unduly influenced by the large number of numbers in the instrument. The reliability coefficients for the five subscales of the CCFNI varied from 0.73 to 0.86, further supporting the reliability of the CCFNI for family members of surgical patients.

In conclusion, the MSFNI demonstrated high reliability. However, some of the subscales had low alpha coefficients which would need further attention in future research.

The Conceptual Framework

This study was conceptualized within the framework of the UBC Model for Nursing (Campbell, 1987). This model was appropriate for use in this study and provided guidance

in the interpretation of findings. It was very useful in classifying the 62 items in the data collection instrument into nine basic human need categories and also provided some guidance in the interpretation of the findings. Furthermore, it was useful in explaining the variability and differences in importance of satisfying basic needs for individuals.

Extent to Which Needs were Met

In order to determine the degree to which needs were met, cross tabulations of the degree of importance by the degree the need was met were computed for each item. Of particular interest to this investigator, however, was the extent to which needs were met for those family members who had indicated that the need was either "Important" or "Very Important". Table 19 (p.61-63) presented that data relative to all 62 items but the following discussion addresses the 22 most important needs and a few other specific needs.

In general, of the 22 most important needs many were either "Fully Met" or "Partially Met" for many of the family members but only seven needs were viewed as being "Fully Met" by at least 50% of the family members. Family members were most satisfied with the degree to which their needs to have questions answered honestly and to see the patient frequently were met. Further, family members appeared to be quite satisfied with the extent to which some of their other needs were being met, particularly needs related to: having understandable explanations, knowledge of the expected outcomes, assurance of good patient care by caring personnel, and feeling there was hope. However, while the need to speak to the surgeon right after surgery was "Fully Met" for 53% of the family members it was also "Not Met" for 32% of the family members. It appears that the important communication with the surgeon in the immediate postoperative period was not taking place for a substantive number of those who wanted it. In addition, many who wanted a nurse available to answer questions after speaking to the surgeon did not feel that the need was well met either.

Perhaps the fact that there was no particular place for family members to wait while the patient was in the operating room and recovery room contributed to this lower level of need satisfaction.

Unfortunately, some of the most important needs were seen as "Not Met" by a substantial number of family members. At least 32% of family members felt that they did not have important information about how to help the patient physically in the hospital or at home. Even more family members (at least 42%) felt that they were not given important information as to how to help the patient emotionally in the hospital or at home. Other important needs related to receiving information were also less well met, including the need to receive information once a day (33% "Not Met"), to be called about changes in patient's condition (29% "Not Met") and to have explanations of what to expect before seeing the patient after surgery (26% "Not Met"). This low level of satisfaction of information needs may well be related to the fact that only 37% felt that their need to know which staff could give information was met. Perhaps family members did not know who to ask or were hesitant to express their needs for information. The low level of satisfaction could also be related to the apparent low importance family members placed on talking to a nurse, or the same nurse every day. Perhaps family members are truly not aware of the important knowledge and information that nurses could give them. Worse yet, nurses may not see the imparting of information to family members as one of their important roles.

A large percentage (70%) of family members felt that their need to feel accepted by staff was met. However, given this degree of satisfaction, it was surprising to note that only about 25% of the family members felt that their need to talk about their own feelings, to talk about the possibility of the patient's death and to talk about the impact of the patient's illness on them was met. This low level of satisfaction could have several explanations. Family

members may not view "acceptance by staff" as giving them the right to burden the staff with their own feelings. Likewise, nurses may not see this as their role or may be too busy and therefore may not provide adequate opportunities for family members to vent their concerns and feelings.

These findings regarding degree of need satisfaction are similar to Molter's (1976) findings in a study with family members of ICU patients. She found, as did Hampe (1975) in a study with spouses of dying patients, that needs related to a desire for information and reassurance and for an opportunity to deal with one's own emotions and feelings were often unmet. However, family members in both studies also indicated that hospital personnel were there to meet the patients' needs and not the relatives' needs.

In general, family members in this study appeared satisfied that many of their needs were at least partly if not fully met. However, some needs, particularly those related to the desire for assurance or information were not well met.

Relationship between Age and Importance of Needs

Two aspects of the relationship between age and the importance of needs will be discussed. The relationship between the age of family members and the importance of needs will be discussed first. The relationship between the age of the patients and importance of needs will then be discussed.

Age of Family Member and Importance

This study found that there was no linear relationship between the age of family members and the total need importance score and no significant relationships between family member age and the importance of most need categories. These findings support those of Leske (1992a) who found that in only one case (need for comfort) was there any relationship between subject age and importance.

In this study a significant positive linear relationship, however, indicated that as family member age increases, the importance of satisfying the needs for collection and removal of wastes and intake of oxygen increase. These increases in importance could be directly attributable to the normal physiological effects of the aging process. However, the fact that the more senior family members have been raised in an era that equated bowel regularity with well-being may also explain the increased importance of the need for collection and removal of wastes.

While the relationship was not statistically significant, there also appeared to be a tendency for the need for mastery to decrease in importance with increasing age of the family members. Perhaps the older family members, through life and personal health care experiences, felt they were already sufficiently informed as to how to help the patient. For reasons of illness or normal aging, perhaps older family members were less physically able to help the patient physically and to help with the patient's physical care and therefore did not consider those needs important.

Age of Patient and Importance

This study also revealed that there were significant relationships between patient age and family members' perceptions of need importance. A significant negative relationship between patient age and total need importance indicated that the greater the age of the patient, the less was the total importance of family members' needs. Further significant negative relationships also indicated that as the age of the patient increased, family members attributed less importance to the satisfaction of the needs for safety and security, for mastery, for respect of self by self and others and for stimulation of the senses. These negative relationships are different than one would expect and are difficult to explain. Perhaps the fact that many of the patients had had previous surgery and hospitalization, and most likely

more than younger patients, meant that close family members had more previous knowledge and information regarding how the patient would manage with the surgical experience and how they could best help the patient. Consequently, those family members may view the needs for safety and security and for mastery as less important than family members of younger patients. Further, the family member's experience with the patient's previous hospitalizations and surgery may decrease their need to talk about their own feelings and the impact of the patient's illness on them and they may be less concerned about the possibility of the patient's death. The decreased importance of these needs would contribute to a reduced mean score for the respect of self subscale. Further, the very high age of some of the patients would contribute to family members being more concerned for the patient than for themselves, further contributing to a decreased importance for satisfaction of the need for respect on the part of family members of older patients.

Differences in Importance of Needs Relative to Gender.

Results of t-tests suggest that there was no significant difference, between males and females, in the overall importance of needs nor in the importance of any of the nine need categories. However, negative t values for all calculations indicated the tendency for males to view the satisfaction of needs generally less important than females. Perhaps if the response rate from males in this study had been greater, the tendency towards decreased importance may have reached a level of significance. One could surmise that the low response rate may be due to a male perception that, when the patient is ill, the family member's needs are not as important and as "the male in the family" they must remain strong. However, the tendency towards decreased need importance by males lends some support to Leske's (1992a) findings that males rated four of the five need categories (information, comfort, information and proximity) significantly lower than females.

Both males and females included the exact same needs in their 20 most important needs and the need to have questions answered honestly was the most important need for both. Twelve of the 15 least important needs were also the same for each group. However, males and females did rank some individual items substantively different and mean scores for four of the differently ranked needs were also significantly different. Females considered it significantly less important to talk to the doctor every day, perhaps because they felt less comfortable than males in communicating with the physicians who are all male. Females, however, considered the need to feel it is alright to cry as significantly more important than males, leading one to conclude that males still feel that it is not socially acceptable for a man to cry. Females also wanted to know of others to help with problems significantly more than did males, perhaps because males see their role as one to solve the problems by themselves and not accept help. Males rated the need to have directions about what to do at the bedside as significantly less important than females giving credence to the existence of a continuing perception that women should be the caregivers and that men don't do that kind of work. Men, however, ranked the need to have information about how to help the patient emotionally at home (#4) much higher than women (#16) perhaps because dealing with the emotional aspects of illness may be that area of assistance they feel they can give. While Bethel's (1981) sample was very small and no statistical analysis was performed relative to gender differences, this study does support some of Bethel's (1981) findings relative to gender differences, particularly related to the fact: that males were more interested than females in communicating with the physician about the patients progress; that females were more interested than males in wanting to know how they might assist in the patients recovery; and that females rated the need for understanding and caring from the staff as more important than males.

Differences in Importance Relative to Relationship to Patient

The results of t-tests indicate that there is no significant difference, between spouses and non-spouses, in total need importance and in all but two of the nine categories of need. Spouses rated the needs for production and utilization of energy and for collection and removal of wastes significantly more important. This supports Leske's (1992a) findings that there was no significant difference related to relationship to patient except in the need category of comfort.

In this study, spouses and non-spouses included 19 of the same needs in their respective lists of 20 most important needs. Spouses not only ranked the needs to know the expected outcome and to speak to the surgeon right after surgery much higher than did non-spouses but their mean scores for these needs were also significantly higher. Spouses in this study, as Leske (1992a) also found, had a greater need to remain close by the patient as expressed in the significantly greater importance they attached to the needs for good food at the hospital, a bathroom and a waiting room nearby, and for assurance that it was alright to leave the hospital. The close bond of the matrimonial or life-partner relationships, as expected, appeared to be associated with an increased need for those family members to remain closer and more vigilant during the post-operative hospitalization of the patient.

Summary

The characteristics of the sample, the findings related to each of the four research questions and a discussion of the results have been presented in this chapter.

The sample was comprised of 80 family members of 68 patients hospitalized in non-intensive care units following major surgery. The age of the subjects ranged from 20 to 92 years, 33.8% were 65 years of age or older and 35% were retired. The majority were spouses (61.3%) and many (75%) had themselves previously undergone surgery.

While the overall response rate of 67.5% was good, but it is unknown whether non-responders differed in any significant way from responders. The sample appeared to be reasonably representative of the population of adult family members of adult patients hospitalized on general surgical units for at least three days following major surgery.

Overall, the family members in this study perceived moderately high to high levels of need importance as measured by the Major Surgery Family Needs Inventory (MSFNI). The family members' most important needs related to having information and assurance about the welfare of the patient and his or her care and to having information about how to assist the patient in the hospital and after discharge. Only after the family members had this assurance and information did they identify as important those needs related to their own well-being.

In general, the family members felt that many of their needs were either partly or fully met. However, some of their needs related to the desire for assurance or information were not well met.

No significant relationship was found between the age of family members and total need importance nor the importance of most need categories. However, as family member age increased, the importance of the needs for collection and removal of wastes and for intake of oxygen increased. A significant negative relationship was found between patient age and family members' total need importance and needs for safety and security, for mastery, for respect of self by self and others and for stimulation of the senses.

No significant difference was found, between males and females, in total need importance nor in the importance of any of the nine need categories. However, some individual need items were rated significantly different by males and females. No significant difference was found, between spouses and non-spouses, in total need importance nor in the importance of seven of the nine need categories. Some individual need items were also rated

significantly different by spouses and non-spouses.

The results of this study were generally consistent with other studies in the literature. The findings were discussed in relation to the theoretical framework, other research studies and methodological problems inherent in the study.

CHAPTER FIVE

Summary, Conclusions, Implications and Recommendations

Introduction

This study was designed to describe the needs of, and determine the importance of needs to, family members of major surgery patients during the time the patient is hospitalized on a general surgical unit post-operatively. It was also designed to determine to what extent the family members felt their needs were met. In addition, the relationships between the importance of needs and age of the patient and the age of the family member were investigated. The differences in importance of needs between males and females and between spouses and non-spouses were also investigated. This chapter will include a summary of the study, conclusions, implications for nursing practice, theory and education, and finally recommendations for future research.

Summary

A review of the literature reveals that any illness or injury which affects one family member may affect other family members (Friedman, 1992; Wright & Leahy, 1994) and that a patient's hospitalization for surgery can disrupt the family members' lifestyles and their normal patterns of living and meeting their own needs (Silva, 1977, 1978; Silva, Geary, Manning, & Zeccolo, 1984). Numerous researchers have investigated the needs of family members of seriously ill patients hospitalized in intensive care units (Hickey, 1990; Leske, 1991a, 1991b, 1992a, 1992b; Molter, 1976). However, only very limited research has been conducted to identify the needs of family members of major surgery patients hospitalized in general surgical units (Bethel, 1981; Carmody, Hickey & Bookbinder, 1991; Silva, 1987). The purpose of this study was to describe the needs of these family members in order to address some of the gaps in the literature.

This study was conceptualized within the framework of the University of British Columbia Model for Nursing (Campbell, 1987). This model views the individual as a behavioural system composed of nine interrelated and interdependent subsystems each responsible for the satisfaction of one basic human need. Family members are viewed as positive forces that are available to assist an individual to meet his or her own needs.

This descriptive survey study was conducted in a 741 bed acute, rehabilitation and extended care hospital located in a city in the southern interior region of British Columbia. Data were collected from a convenience sample of 80 adult family members of 68 adult major surgery patients hospitalized post-operatively in the non-intensive care surgical units. Following agreement to be approached regarding the study, the researcher discussed the study and subjects voluntarily participated.

All subjects completed the Major Surgery Family Needs Inventory (MSFNI) and a demographic and health information form. The MSFNI was tool which consisted of a modified version of the previously developed Critical Care Family Needs Inventory (Molter & Leske, 1983) with additional items developed and added by the investigator. Descriptive and parametric statistics were used to analyze the data.

The sample comprised 54 female and 26 male family members, of which 49 (61.3%) were spouses and 31 (38.8%) were non-spouses. The mean age of the subjects was 56.04 years. A large percentage (35%) of the subjects were retired, 20% were homemakers and 45% were employed outside the home. The majority of family members reported previous experience with personal hospitalization and surgery.

The patient group, whose family members comprised the sample, was composed of 30 males and 38 females with a mean age of 59.09 years. On the current admission all patients had undergone major surgery which required at least three days of post-operative

hospitalization. Twenty-two (32.5%) of the operations were related to a diagnosis of cancer. Sixty-four (94.1%) of the patients had been previously hospitalized and 57 (83.8%) had previously undergone surgery.

Overall, the adult family members of adult surgical patients hospitalized in non-intensive care units perceived moderately high to high levels of needs importance ($M=182.6$, $SD=31.1$). There was, however, a high degree of variability in family members' total scores and in the importance of individual items indicating that the importance of needs differed for family members and that family members clearly discriminated amongst the 62 needs with respect to the importance of satisfying the needs.

The most important need was to have questions answered honestly. The next 21 most important needs all related to family members' needs: to have hope; to have understandable explanations and timely information about the patient's illness and surgery, their expected outcomes, and about the patient's treatment and progress throughout the period of hospitalization; and to have information about how to help the patient physically and emotionally in the hospital and after discharge. It appeared that only after the family members had given priority importance to these needs did they identify as important those needs related to their own physical and psychosocial needs. These findings were supported by research by Bethel (1981) and Silva (1987) who investigated the needs of spouses, Carmody, Hickey and Bookbinder (1991) who investigated the needs of family members while the patient was in the operating room and Leske (1991a, 1991b, 1992a, 1992b) who quantitatively analyzed studies investigating needs of family members of intensive care unit patients.

The need categories, as derived from the UBC Model for Nursing (Campbell, 1987), that were of most important for family members to satisfy during the period of

hospitalization were the need for safety and security and the need for mastery. The next important need categories related to physiological needs, namely the need for intake of food and fluid, for collection and removal of wastes, and for intake of oxygen. Of lesser importance, in this order, were the needs for respect of self by self and others, for balance in production and utilization of energy, for love, belongingness and dependence and lastly, for stimulation of the senses.

In general, family members in this study felt that many of their needs were either partly or fully met. However, some of the needs were not well met, particularly those related to having information about the patient's illness and progress during hospitalization and to having information about how to help the patient physically and emotionally both in the hospital and after discharge.

No significant relationship was found between the age of family members and total need importance nor the importance of most need categories. However, a significant positive relationship was found between family member age and the need for collection and removal of wastes ($r = .32$, $p = .002$). A significant positive relationship was also found between family member age and the need for intake of oxygen ($r = .19$, $p = .05$).

A significant negative relationship was found between patient age and family members' total need importance ($r = .19$, $p = .05$). A significant negative relationship was also found between the age of the patient and the importance of the family members' needs for safety and security ($r = -.21$, $p = .03$), mastery ($r = -.23$, $p = .02$), respect of self by self and others ($r = -.20$, $p = .04$) and stimulation of the senses ($r = -.20$, $p = .04$).

No significant difference was found between males and females in the overall importance of needs nor in the importance of any of the nine categories of need. However, data analysis indicated that males tended to view the satisfaction of needs generally less

important than females and that a few need items were rated significantly different by males and females.

No significant difference was found between spouses and non spouses in total need importance nor in the importance of most need categories. Spouses rated as more important the need for balance in production and utilization of energy ($t=2.12$, $p=.04$) and the need for collection and removal of wastes ($t=2.07$, $p=.04$). A few individual need items were also rated significantly different by males and females.

The University of British Columbia Model for Nursing (Campbell, 1987) provided some guidance in the interpretation of findings and was useful in classifying the data collection instrument's 62 different need items into nine basic human need categories. The model provided some guidance in the interpretation of findings and was also useful in explaining the variability and differences in importance of satisfying basic needs for individuals.

Conclusions

The results of this study cannot be generalized due to the use of convenience sampling procedures. However, the findings of this study suggest many similarities and some differences among subjects. The findings of this study provide a basis for the following conclusions.

Family members have needs that they can readily identify as being important to satisfy during the hospitalization of another family member for surgery. Further, they can discriminate between their different needs as to their relative importance. Family members' most important needs relate to having honest and understandable information and assurance about the care and welfare of the patient and to having information as to about how they may help the patient in the hospital and after discharge. In addition, family members do not feel that their own physical and psychosocial needs are as important as those of the patient during

the patient's hospitalization. Only when family members are assured of the patient's welfare do they attribute importance to the satisfaction of needs related to their own welfare.

Many of the important needs of family members could easily be met by nursing interventions specifically directed at providing the requisite information and assurance. However, the family members' needs that are least met are those related to having the information relative to the patient's treatment and progress and to how they could help the patient physically and emotionally during hospitalization and after discharge. This may be because family members do not see the nurse as a valuable source of information or because nurses themselves do not see that giving assurance and information to family members is an important part of their role.

The age of the family member is not a significant factor in the importance of satisfaction of most of the family member's needs. The physiological needs for collection and removal of wastes and the intake of oxygen are rated as increasing in importance as the age of the family member increases. These increases in importance may be due to the effects of the normal aging process or to the presence of pathological changes in the most likely in older adults.

The age of the patient does appear to be a significant factor in the importance of satisfaction of some of the family member's needs. As the age of the patient increases, the importance of satisfaction of some of the family members' needs decreases: the needs for safety and security, for mastery and for respect of self by self and others. These may be related to the fact that many older patient's have had previous surgery and the family member is therefore experienced in dealing with the unpredictability often associated with hospitalization and surgery of a loved one.

The gender of the family member does not appear to be a significant factor in the

importance of most needs and need categories. However, males tend to view the satisfaction of their needs as less important than females. In particular, males are less inclined to want information as to how to help the patient in the hospital and to want understanding and caring from the staff members.

The spousal versus non-spousal relationship of the family member to the patient does not appear to be a significant factor in how family members view the relative importance of need satisfaction. However, spouses and life-partners view more importantly the need to talk to the surgeon and know the outcome of the surgery. Spouses also have a greater need to remain close by the patient in the hospital during the period of hospitalization.

Implications for Nursing Practice and Theory

The findings of this study suggest several important implications for nursing practice, theory and education. When a patient is hospitalized for major surgery, the patient's family members have many needs that they feel are important for them to satisfy during the period of the patient's hospitalization. Therefore, nurses should implement specific strategies to assist family members in meeting their needs. However, a precondition to the implementation of specific strategies is the necessity for the hospital, the nursing unit and the nurse to be guided by a philosophy of family-centered care and by policies and procedures which support nurses' work with family members. The policies and procedures must also foster a collaborative approach to meeting family members' needs, involving not only nurses but physicians and other health care team members as well. In addition, while some nurses may find working with families a natural part of their care, other nurses may benefit from inservice education programs which would assist them to develop the skills necessary for establishing a rapport, and working, with family members as an integral part of their nursing care.

As this study further found, family members may differ in the needs they feel are most important to satisfy during the patient's post-operative hospitalization. Because of these differences, the nurse must not assume what the needs are but must assess what the important needs are for each family member. A short, self-administered check-list assessment tool could be used to identify important family member needs and be implemented during the initial assessment of the patient-family group upon admission. As needs may change over the period of the patient's hospitalization, ongoing assessment of family members' needs should be an integral part of the continuing care of the patient and his or her family, particularly in situations where the patient's progress does not follow the predicted course. Nurses should actively encourage family members to express their needs particularly since some family members do not consider their needs to be important enough to be attended to by the nurse.

While this study found that different family members may have different needs they view as important to satisfy, it also found that, in general, some of the most important needs were related to family members having honest and understandable information about the welfare, progress and care of the patient. Further, many of these important needs were not met. Specific routine strategies could be implemented to provide family members with important information through-out the patient's hospitalization. For example, family members could be included in the patient's orientation to the hospital unit and pre- and post-operative teaching sessions. Other strategies could also be implemented to provide family members with important information, such as providing: a family information booklet giving general information about hospital services, unit routines and what to expect on the day of surgery; a family resource library containing suitable written or audiovisual educational materials on a broad range of topics important to family members; an information bulletin board on the nursing unit; patient progress reports to family members as a part of the daily

plan of care; a comfortable area where family members may wait, receive progress reports about the patient, be contacted by the surgeon and have questions answered during the time the patient is in the operating or recovery room; and, providing family members with a specific nurse (eg. primary nurse or clinical nurse specialist) who they may contact for information and for answers to specific questions.

The findings in this study also indicated that some of the other most important needs related to the family member having assurance that the patient was well cared for by caring personnel. In light of this, nurses need to exhibit genuine concern for both the patient and the family members. They also need to purposefully establish an empathic, caring relationship not only with the patient but with the family members as well. By showing kindness, personalizing communications and providing opportunities for the family member to talk to them, the nurse can establish a trusting, therapeutic and collaborative relationship through which family members may meet their needs for assurance about the welfare of the patient.

As this study indicated, family members want to remain close-by and to be able to help the patient during the post-operative period. The hospital needs to ensure that a waiting room, washroom and telephone are available near the nursing unit for the family members use, that food facilities are available in the hospital and that visiting hours are flexible. Through a collaborative nurse-family relationship nurses should provide important information about how family members might assist the patient physically and emotionally in the hospital and, if family members wish, the nurse should also assist them to actively participate in the patient's post-operative hospital care. Nurses must also provide family members with information relative to how they might help the patient physically and emotionally after discharge and, indeed, should actively include family members in the discharge planning for the patient. Follow-up home care of the patient after discharge should

also include assessing the important needs of family members and implementing specific strategies to assist them in meeting those needs

A last important implication for nursing practice relates to the findings in this study which demonstrated that many of the family members' important needs for information were not met and that family members did not appear to recognize the nurse as a prime source of that information. Nurses must not only recognize the importance of their teaching and information dissemination roles and but must actively fulfill those roles with both patients and family members. Nurses must know what information is appropriate for them to give and must ensure that the information is provided to the level desired by the family member. Through ongoing relationships and communication with nurses, family members will become aware of the important role of nurses in providing information and assurance and will actively seek out nurses to assist them to meet their own basic human needs for safety and security and for mastery.

In this study, as in many other studies that identified the needs of family members of critical care patients, needs were ranked in importance by mean scores which were calculated using every family member's individual rating for that need. This ranking process only provided a clear understanding of the sample group's perception of need importance but, as such, did not provide as clear an understanding of differences in individual perceptions and priorities. Since priorities and perceptions of importance may differ significantly amongst individuals and between an individual and the group, the ranking of the importance of needs for a group may not provide significant direction for the planning of individualized nursing care other than to underscore the need to consider individual perceptions. From a theoretical perspective, perhaps needs should be conceived of differently than from the perspective of ranking.

The implication that this study's findings have for nursing education is that nursing curricula should include classroom and clinical experiences related to family members' experiences with surgery, the effects of patient surgery on family members, the specific needs that family members view as important to satisfy during the surgical patient's hospitalization, and the role of nurses in assisting family members to meet their needs during that time. Not only would students gain a better understanding of the surgical experience for both patients and family, but they would also be able to apply their increased understanding of family-centered nursing to other patient-family populations.

The conceptual framework used in this study provided direction in understanding the importance of meeting family members' needs, in classifying family member needs and in explaining individual variability in the importance of needs. Use of the UBC Model for Nursing (Campbell, 1987) would provide guidance for nurses in assessing family members' needs and planning strategies for assisting family members to meet those needs.

In summary, the findings of this study indicate that family members of surgical patients have important needs during the patient's hospitalization and that these needs are not always met. Further, these findings emphasize the importance of nurses knowing what these needs are and of nurses implementing specific strategies to assist family members to meet their needs.

Recommendations for Further Research

The findings of this study inspire suggestions for further research in several areas which would broaden the knowledge base specific to the needs of family members of patients hospitalized on non-intensive care units following major surgery.

Further refinement of the Major Surgery Family Needs Inventory (MSFNI) is needed. The internal consistency reliability of some of the subscales, particularly the five subscales

encompassing physiological needs, requires strengthening perhaps by increasing the number of items in each subscale or combining the five subscales into one subscale. Suggestions made by some subjects regarding additional important needs should be also incorporated into the instrument. However, because the instrument may be too lengthy, consideration should be given to combining or eliminating some of the items. Some of the items and the instructions should be reworded in order to improve the overall readability of the instrument. The instructions on the instrument need to be clarified in order to ensure that family members respond to all items both in terms of their importance and the degree to which they were met. The timelines for completion of the instrument should be reconsidered to further ensure that family members can respond to all items, particularly those that may require impending discharge of the patient before the family member would consider them to be important to satisfy.

Given the convenience method of sampling, the lack of proportionate representation of males and females in the sample, the limited number of surgeries in some classifications and the fact that only one hospital was used for data collection, this study should be replicated. Replication would lead to a clearer understanding of the needs of family members, in general, and of differences in need importance relative to age, gender and relationship to patient.

Other possible areas for research would be to examine the relationship between importance of needs and other variables such as level of education, family members' personal experiences with surgery, type of patient surgery, and the presence of a malignant diagnoses. With a larger sample size, further examination of the differences in importance of needs for different classifications of family members other than spousal versus non-spousal could also be investigated.

Further investigation using qualitative research methods may identify other needs that family members may have. Qualitative methods might also elicit an understanding of why family members rate the importance of needs as they do and, further, why different family members rate the importance of individual needs differently.

The further understanding gained from replicating this study, examining other variables and from using qualitative methods would assist nurses in planning and implementing appropriate strategies for assisting family members to meet their needs. Another area for research would then be the evaluation of specific strategies relative to their the effectiveness in assisting family members to meet their needs.

In conclusion, it is this researcher's hope that further research is conducted which will contribute to an expansion of the body of nursing knowledge about family-centered nursing, in general, and, in particular, about the needs of family members during the hospitalization of another family member for major surgery.

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Appendix A

Introductory Letter: University of British Columbia

Appendix B

Introductory Letter: Hospital

Appendix C

Major Surgery Family Needs Inventory

MAJOR SURGERY FAMILY NEEDS INVENTORY

The following questionnaire lists needs that family members may have while their family member is a patient in the hospital recovering from surgery. The scale provides a way for you to indicate the importance of those needs for you and whether those needs have been met. We would prefer you respond to this questionnaire at least three days after your family member's surgery but prior to him or her being discharged from the hospital.

Please read each statement. To the right of each statement you will see four columns labelled from "1" Not Important to "4" Very Important. Place an "X" in the numbered column that most closely indicates how important the need was for **YOU**. Think of yourself, not other family members, when responding.

On the far right are three more column labelled from "1" Not Met to "3" Fully Met. Place an "X" in the numbered column that most closely reflects the degree to which the need was met.

	DEGREE OF IMPORTANCE				DEGREE NEED WAS MET		
	1: Not Important	2: Slightly Important	3: Important	4: Very Important	1: Not Met	2: Partially Met	3: Fully Met
WHILE MY FAMILY MEMBER IS IN HOSPITAL AFTER SURGERY, I NEED TO:	1	2	3	4	1	2	3
1. Know the expected outcome							
2. Have an explanation of what to expect before seeing the patient for the first time after surgery							
3. Talk to the doctor every day							
4. Have a specific person to call at the hospital when unable to visit							
5. Have questions answered honestly							
6. Have visiting hours changed for special conditions							
7. Talk about feelings about what has happened							
8. Have good food available in the hospital							
9. Have directions as to what to do at the bedside							
10. Visit at any time							
11. Know which staff members could give what type of information							
12. Have friends nearby for support							
13. Know why things were done for the patient							
14. Feel there is hope							
15. Know about the types of staff members taking care of the patient							
16. Know how the patient is being treated medically							
17. Be assured that the best care possible is being given to the patient							
18. Have a place to be alone while in the hospital							
19. Know exactly what is being done for the patient							

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	DEGREE OF IMPORTANCE				DEGREE NEED WAS MET		
	1: Not Important	2: Slightly Important	3: Important	4: Very Important	1: Not Met	2: Partially Met	3: Fully Met
WHILE MY FAMILY MEMBER IS IN HOSPITAL AFTER SURGERY, I NEED TO:	1	2	3	4	1	2	3
20. Have comfortable furniture available							
21. Feel accepted by the hospital staff							
22. Have someone to help with financial problems							
23. Have a telephone nearby							
24. Have a pastor (clergy, minister, priest, rabbi, etc) visit							
25. Talk about the possibility of the patient's death							
26. Have another person with me when visiting							
27. Have someone be concerned with my health							
28. Be assured it is alright to leave the hospital for awhile							
29. Talk to <u>the same</u> nurse everyday							
30. Talk to <u>a</u> nurse everyday							
31. Feel it is alright to cry							
32. Be told about other people that could help with problems							
33. Have a bathroom nearby							
34. Be alone at any time							
35. Be told about someone to help with family problems							
36. Have explanations given that are understandable							
37. Have visiting hours start on time							
38. Be told about chaplain services							
39. Help with the patient's physical care							
40. Be told about discharge plans while they are being made							
41. Be called at home about changes in the patient's condition							
42. Receive information about the patient at least once a day							
43. Feel that the hospital personnel care about the patient							
44. Know specific facts concerning the patient's progress							
45. See the patient frequently							
46. Have a waiting room nearby							

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	DEGREE OF IMPORTANCE				DEGREE NEED WAS MET		
	1: Not Important	2: Slightly Important	3: Important	4: Very Important	1: Not Met	2: Partially Met	3: Fully Met
WHILE MY FAMILY MEMBER IS IN HOSPITAL AFTER SURGERY, I NEED TO:	1	2	3	4	1	2	3
47. Be informed of ways to help the patient <u>physically</u> in the hospital							
48. Be informed of ways to help the patient <u>emotionally</u> in the hospital							
49. Be informed of ways to help the patient <u>physically</u> after he/she returns home							
50. Be informed of ways to help the patient <u>emotionally</u> after he/she returns home							
51. Pay attention to my own physical problems							
52. Pay attention to my routine bowel and bladder patterns							
53. Get some rest for myself							
54. Follow my own regular eating habits							
55. Take steps to ensure my breathing remains comfortable and easy							
56. Know what to expect on the day of surgery							
57. Speak to the surgeon as soon as surgery was completed							
58. Have a nurse available to answer questions after talking to the surgeon							
59. Take time for exercise, recreation and/or leisure activities							
60. Have physical assistance to get to the patient's room							
61. Talk about how the patient's illness impacts on me							
62. Find ways to deal with my own stress							

63. Are there any other needs, that are not included in this list, which you feel you have? If so, please list them and indicate how important they were to you and whether or not they were fully met, partially met or not met.

PLEASE GO ON TO THE LAST PAGE.....

- 4 -

This section asks questions about your family member who is the patient and about you. Please answer these questions as best you can.

INFORMATION ABOUT THE PATIENT:

Sex: Male ____ Female ____

Age: ____ years

What surgery did the patient have? _____

Was the surgery related to a diagnosis of cancer? Yes ____ No ____ Don't Know ____

How many days is it since the patient's surgery? ____ days

Is the patient still in the hospital? Yes ____ No ____

Has the patient been hospitalized before? Yes ____ No ____

Has the patient had surgery before? Yes ____ No ____

If "Yes", what types of surgery has he/she had? _____

Does the patient have any complicating health problems? Yes ____ No ____

If "Yes", what types of problems are they? _____

INFORMATION ABOUT YOURSELF:

Sex: Male ____ Female ____

Age: ____ years

Occupation: _____

Relationship to patient: _____

Have you ever been hospitalized? Yes ____ No ____

Have you ever had surgery? Yes ____ No ____

Have any of your close family members ever had surgery? Yes ____ No ____

Are you staying in your own home during the patient's hospitalization? Yes ____ No ____

Will the patient be staying with you immediately after discharge from the hospital? Yes ____ No ____

Thank you very much for taking the time to answer these questions. Please place the completed questionnaire in the self-addressed envelope provided and return it by mail or leave it at the Nursing Station on the unit where the patient is hospitalized.

Code #: _____

Appendix D

Major Surgery Family Needs Inventory with
UBC Model for Nursing Need Categories

Table D-1: MSFNI Instrument Items with U.B.C. Model Need Category Allocation

	U.B.C. Need Category ^a								
	MAST	RESP of SELF	LOVE BEL. DEP.	SAFE SEC	PROD UTIL ENER	STIM of SENS	INT of OXY	COLL REM WAST	INT FOOD FLD
* indicates primary focus ** indicates secondary focus									
1. Know the expected outcome	**			*					
2. Explanation of what to expect before seeing patient				*					
3. Talk to doctor every day		**	**	*					
4. Specific person to call at hospital			**	*					
5. Questions answered honestly	**	**		*					
6. Visiting hours changed for special conditions		**	*						
7. Talk about feelings		*	**	**					
8. Good food available in hospital		**							*
9. Directions what to do at bedside	*			**					
10. Visit at any time			*	**					
11. Know which staff could give what type of information	*			**					
12. Friends nearby for support			*	**					
13. Know why things done for patient	**			*					
14. Feel there is hope				*					
15. Know types of staff taking care of the patient	**			*					
16. Know how patient treated medically	**			*					
17. Assured that best care given				*					
18. Place to be alone in the hospital		**			**	*			
19. Know what done for patient	**			*					
20. Comfortable furniture available					*				
21. Feel accepted by hospital staff		*							
22. Have someone to help with financial problems			*						
23. Have a telephone nearby			**		*				
24. Have a pastor (clergy, minister, priest, rabbi, etc.) visit			*						

	MAST	RESP of SELF	LOVE BEL. DEP.	SAFE SEC	PROD UTIL ENER	STIM of SENS	INT of OXY	COLL REM WAST	INT FOOD FLD
25. Talk about the possibility of the patient's death		*		**					
26. Have another person with me when visiting		**	*	**					
27. Have someone be concerned with my health		*	**						
28. Be assured it is alright to leave the hospital for awhile				*					
29. Talk to <u>the same</u> nurse everyday		**	*	**					
30. Talk to <u>a</u> nurse everyday				*					
31. Feel it is alright to cry		*		**					
32. Be told about other people that could help with problems			*						
33. Have a bathroom nearby					**			*	
34. Be alone at any time		**			**	*			
35. Be told about someone to help with family problems			*						
36. Have explanations given that are understandable	**			*					
37. Have visiting hours start on time		*	**	**					
38. Be told about chaplain services			*						
39. Help with the patient's physical care	*		**						
40. Be told about discharge plans while they are being made		**	*						
41. Be called at home about changes in the patient's condition			**	*					
42. Receive information about the patient at least once a day	**		**	*					
43. Feel that the hospital personnel care about the patient				*					
44. Know specific facts concerning the patient's progress	**			*					
45. See the patient frequently			*	**					
46. Have a waiting room nearby		**			*				

	MAST	RESP of SELF	LOVE BEL. DEP.	SAFE SEC	PROD UTIL ENER	STIM of SENS	INT of OXY	COLL REM WAST	INT FOOD FLD
47. Informed of ways to help the patient <u>physically</u> in the hospital	*								
48. Informed of ways to help the patient <u>emotionally</u> in the hospital	*		**						
49. Informed of ways to help the patient <u>physically</u> after discharge	*								
50. Informed of ways to help the patient <u>emotionally</u> after discharge	*		**						
51. Pay attention to own physical problems		*		**			**	**	**
52. Pay attention to my routine bowel and bladder patterns		**						*	
53. Get some rest for myself		**			*				
54. Follow own eating habits		**							*
55. Take steps to ensure breathing remains comfortable and easy							*		
56. Know what to expect on the day of surgery	**			*					
57. Speak to surgeon as soon as surgery completed		**		*					
58. Nurse available to answer questions after talk to surgeon	**	**		*					
59. Take time for exercise, recreation, leisure activities		*			**	**			
60. Physical assistance to get to the patient's room				**	*		**		
61. Talk about how the patient's illness impacts on me		*							
62. Find ways to deal with my own stress		**		*	**				

Note: ^aNeed categories of UBC Model for Nursing (Campbell,1987). Categories abbreviated as follows: MAST = need for mastery; RESP of SELF = need for respect for self by self and others; LOVE, BEL., DEP = need for love, belongingness and dependence; SAFE SEC = need for safety and security; PROD UTIL ENER = need for balance between production and utilization of energy; STIM of SENS = need for stimulation of the system's senses (ie. hearing, vision, smell,touch and taste); INT of OXY = need for intake of oxygen; COLL REM WAST = need for collection and removal of accumulated wastes; INT FOOD FLD = need for intake of food and fluid; nourishment.

Appendix E

Distribution of Family Member Responses to Importance of Individual Items

Table E-1

Distribution of Subject Responses to Importance of Individual Items

	Not Important f(%)	Slightly Important f(%)	Important f(%)	Very Important f(%)	Mean	SD
1. Know expected outcome	3(3.8)	1(1.3)	11(13.8)	65(81.3)	3.72	.67
2. Explain what to expect before seeing patient	5(6.3)	14(17.5)	23(28.8)	38(47.5)	3.17	.94
3. Talk to doctor every day	16(20.0)	29(36.3)	18(22.5)	17(21.3)	2.45	1.04
4. Specific person to call	15(18.8)	14(17.5)	31(38.8)	20(25)	2.70	1.05
5. Question answered honestly	0(00.0)	1(1.3)	8(10.0)	71(88.8)	3.87	.37
6. Visiting hours changed	13(16.3)	8(10.0)	30(37.5)	29(36.3)	2.94	1.06
7. Talk about own feelings	12(15.0)	14(17.5)	28(35.0)	26(32.5)	2.85	1.04
8. Good food available	10(12.5)	9(11.3)	21(26.3)	40(50.0)	3.14	1.05
9. Directions re: what to do at the bedside	18(27.5)	16(20.0)	29(36.3)	17(21.3)	2.56	1.07
10. Visit at any time	25(31.3)	13(16.3)	23(28.8)	19(23.8)	2.45	1.17
11. Know which staff members could give what information	7(8.8)	14(17.5)	34(42.5)	25(31.3)	2.96	.92
12. Friends nearby for support	11(13.8)	11(13.8)	30(37.5)	28(35.0)	2.94	1.02
13. Know why things done	1(1.3)	3(3.8)	27(33.8)	49(61.3)	3.55	.63
14. Feel there is hope	4(5.0)	1(1.3)	9(11.3)	66(82.5)	3.71	.73
15. Know type of staff caring for patient	4(5.0)	16(20.0)	38(47.5)	22(27.5)	2.97	.83
16. Know how patient treated medically	1(1.3)	4(5.0)	23(28.8)	52(65.0)	3.57	.65
17. Assured best care given	1(1.3)	2(2.5)	8(10.0)	69(86.3)	3.81	.53
18. Place to be alone in hospital	25(31.3)	21(26.3)	22(27.5)	12(15.0)	2.26	1.06
19. Know what done for patient	1(1.3)	5(6.3)	19(23.8)	55(68.8)	3.60	.67
20. Comfortable furniture	15(18.8)	27(33.8)	26(32.5)	12(15.0)	2.44	.97
21. Feel accepted by staff	5(6.3)	8(10.0)	36(45.0)	31(38.8)	3.16	.85
22. Someone to help with financial problems	36(45.0)	17(21.3)	12(15.0)	15(18.8)	2.07	1.17
23. Have telephone nearby	16(20.0)	13(16.3)	37(46.3)	14(17.5)	2.61	1.00
24. Have pastor visit	30(37.5)	22(27.5)	14(17.5)	14(17.5)	2.15	1.11
25. Talk about patient's possible death	22(27.5)	10(12.5)	25(31.3)	23(28.8)	2.61	1.17
26. Person with me when visiting	50(62.5)	10(12.5)	14(17.5)	6(7.5)	1.70	1.01
27. Someone concerned about my health	38(47.5)	17(21.3)	17(21.3)	8(10.0)	1.94	1.05

Table E-1 (continued)

	Not Important f(%)	Slightly Important f(%)	Important f(%)	Very Important f(%)	Mean	SD
28. Assured alright to leave	19(23.8)	9(11.3)	35(43.8)	17(21.3)	2.62	1.07
29. Talk to <u>same</u> nurse everyday	31(38.8)	16(20.0)	19(23.8)	14(17.5)	2.20	1.14
30. Talk to <u>a</u> nurse everyday	14(17.5)	19(23.8)	28(35.0)	19(23.8)	2.65	1.03
31. Feel it is alright to cry	19(23.8)	12(15.0)	27(33.8)	22(27.5)	2.65	1.13
32. Told re: help with problems	16(20.0)	13(16.3)	29(36.3)	22(27.5)	2.71	1.08
33. Bathroom nearby	7(8.8)	12(15.0)	25(31.3)	36(45.0)	3.13	.97
34. Be alone at any time	35(43.8)	16(20.0)	17(21.3)	12(15.0)	2.08	1.12
35. Told re: others to help with family problems	25(31.3)	16(20.0)	29(36.3)	10(12.5)	2.30	1.05
36. Understandable explanations	3(3.8)	1(1.3)	11(13.8)	65(81.3)	3.72	.67
37. Visiting hours on time	12(15.0)	5(6.3)	28(35.0)	35(43.8)	3.08	1.05
38. Told re: chaplain services	44(55.0)	13(16.3)	15(18.8)	8(10.0)	1.84	1.06
39. Help with patient's physical care	11(13.8)	9(11.3)	33(41.3)	27(33.8)	2.95	1.01
40. Told about discharge plans	4(5.0)	6(7.5)	27(33.8)	43(53.8)	3.36	.83
41. Called at home about changes in condition	3(3.8)	3(3.8)	14(17.5)	60(75.0)	3.64	.73
42. Get information once a day	2(2.5)	11(13.8)	30(37.5)	37(46.3)	3.28	.80
43. Feel personnel care about the patient	3(3.8)	1(1.3)	8(10.0)	68(85.0)	3.76	.66
44. Know facts re: progress	2(2.5)	4(5.0)	14(17.5)	60(75.0)	3.65	.70
45. See the patient frequently	2(2.5)	3(3.8)	17(21.3)	58(72.5)	3.64	.68
46. Waiting room nearby	12(15.0)	15(18.8)	22(27.5)	31(38.8)	2.90	1.09
47. Informed: to help patient <u>physically in hospital</u>	4(5.0)	9(11.3)	29(36.3)	38(47.5)	3.26	.85
48. Informed: to help patient <u>emotionally in hospital</u>	4(5.0)	6(7.5)	24(30.0)	46(57.5)	3.40	.84
49. Informed: to help patient <u>physically after discharge</u>	1(1.3)	3(3.8)	14(17.5)	62(77.5)	3.71	.60
50. Informed: to help patient <u>emotionally after discharge</u>	3(3.8)	3(3.8)	18(22.5)	56(70.0)	3.59	.74
51. Attend to physical problems	21(26.3)	10(12.5)	21(26.3)	28(35.0)	2.70	1.20
52. Attend to routine bowel/ bladder patterns	20(25.0)	6(7.5)	28(35.0)	26(32.5)	2.75	1.16
53. Get rest for myself	10(12.5)	12(15.0)	22(27.5)	36(45.0)	3.05	1.05
54. Follow eating habits	11(13.8)	11(13.8)	25(31.3)	33(41.3)	3.00	1.06
55. Ensure breathing easy	20(25.0)	4(5.0)	30(37.5)	26(32.5)	2.77	1.16

Table E-1 (continued)

	Not Important f(%)	Slightly Important f(%)	Important f(%)	Very Important f(%)	Mean	SD
55. Ensure breathing easy	20(25.0)	4(5.0)	30(37.5)	26(32.5)	2.77	1.16
56. Know what to expect day of surgery	2(2.5)	1(1.3)	15(18.8)	62(77.5)	3.71	.62
57. Speak to surgeon right after surgery	4(5.0)	5(6.3)	14(17.5)	57(71.3)	3.55	.83
58. Nurse to answer questions after talk to surgeon	7(8.8)	7(8.8)	27(33.8)	39(48.8)	3.23	.94
59. Take time for exercise	15(18.8)	19(23.8)	22(27.5)	24(30.0)	2.69	1.10
60. Physical assistance to get to room	50(62.5)	4(5.0)	17(21.3)	9(11.3)	1.81	1.13
61. Talk re: impact of patient's illness on me	25(31.3)	18(22.5)	24(30.0)	13(16.3)	2.31	1.09
62. Find way to deal with stress	13(16.3)	12(15.0)	22(27.5)	33(41.3)	2.94	1.11

Appendix F

Items, Item Mean Scores, and Subscale Mean Scores for Each Subscale

Table F-1: Items, Item Mean Scores and Subscale Mean Scores for Each SubscaleSafety and Security Subscale

Item	Mean
5. Questions answered honestly	3.87
17. Assured the best possible care is being given	3.81
43. Feel personnel care about the patient	3.76
1. Know the expected outcome	3.72
36. Have understandable explanations	3.72
56. Know what to expect day of surgery	3.71
14. Feel there is hope	3.71
44. Know specific facts re: patient's progress	3.65
41. Called at home about changes in condition	3.64
19. Know what is being done for patient	3.60
16. Know how patient treated medically	3.55
13. Know why things done	3.55
57. Speak to surgeon right after surgery	3.55
42. Receive information once a day	3.28
58. Nurse to answer questions after talk to surgeon	3.23
2. Explain what to expect before seeing patient	3.17
15. Know type of staff caring for patient	2.97
62. Find ways to deal with stress	2.94
4. Specific person to call at hospital	2.70
30. Talk to a nurse everyday	2.65
28. Assured alright to leave hospital	2.62
3. Talk to the doctor every day	2.45
Subscale Mean Score	3.36

Mastery Subscale

Item	Mean
49. Informed: how to help the patient <u>physically after discharge</u>	3.71
50. Informed: how to help the patient <u>emotionally after discharge</u>	
48. Informed: how to help the patient <u>emotionally in hospital</u>	3.59
47. Informed: how to help the patient <u>physically in hospital</u>	
11. Know which staff could give what information.	3.40
39. Help with the patient's physical care	3.26
9. Directions: what to do at the bedside	2.96
	2.95
	2.56
Subscale Mean Score	3.21

Food and Fluid Subscale

Item	Mean
8. Good food available in hospital	3.14
54. Follow my own regular eating habits	3.00
Subscale Mean Score	3.07

Collection and Removal of Wastes Subscale

Item	Mean
33. Have bathroom nearby	3.13
52. Attend to routine bowel/bladder patterns	2.75
Subscale Mean Score	2.94

Intake of Oxygen Subscale

Item	Mean
55. Ensure my breathing remains comfortable and easy	2.77
Subscale Mean Score	2.77

Respect of Self Subscale

Item	Mean
21. Feel accepted by hospital staff	3.16
37. Visiting hours start on time	3.08
51. Attend to own physical problems	2.70
7. Talk about own feelings	2.85
59. Take time for exercise/leisure activities	2.69
31. Feel it is alright to cry	2.65
25. Talk about patient's possible death	2.61
61. Talk re: impact of patient's illness on me	2.31
27. Someone concerned with my health	1.94
Subscale Mean Score	2.67

Balance in Production and Utilization of Energy Subscale

Item	Mean
53. Get rest for myself	3.05
46. Waiting room nearby	2.90
23. Telephone nearby	2.61
20. Comfortable furniture available	2.44
60. Physical assistance to get to patient's room	1.81
Subscale Mean Score	2.56

Love, Belongingness and Dependence Subscale

Item	Mean
45. See the patient frequently	3.64
40. Told about discharge plans while they are being made	3.36
6. Visiting hours changed	2.94
12. Friends nearby for support	2.94
32. Told re: others to help with problems	2.71
10. Visit at any time	2.45
35. Told re: others to help with family problems	2.30
29. Talk to <u>the same nurse</u> everyday	2.20
24. Have a pastor (clergy, minister, priest, rabbi) visit	2.15
22. Someone to help with financial problems	2.07
38. Told re: chaplain services	1.84
26. Another person with me when visiting	1.70
Subscale Mean Score	2.53

Stimulation of the Senses Subscale

Item	Mean
18. Have a place to be alone while in the hospital	2.26
34. Be alone at any time	2.08
Subscale Mean Score	2.17

Appendix G

Comparison of Rank Order of Needs in this Study with Rank Order in Leske (1992b)

Table G-1

Comparison of Rank Order of Needs in this Study with Rank Order in Leske (1992b)

Rank of Item in this Study ^a	Rank of Item in LeskeStudy ^b	Item #	Need
1	1	5.	Questions answered honestly
2	2	17.	Assured best care given
3	7	43.	Feel personnel care about the patient
4	3	1.	Know expected outcome
5	10	36.	Understandable explanations
6	-- ^c	49.	Inform: to help patient <u>physically</u> at home
7	4	14.	Feel there is hope
8	-- ^c	56.	Know what to expect day of surgery
9	5	44.	Know facts re: patient's progress
10	13	45.	See the patient frequently
11	6	41.	Called at home about changes in condition
12	11	19.	Know what being done for patient
13	-- ^c	50.	Inform: to help patient <u>emotionally</u> at home
14	8	16.	Know how patient treated medically
15	12	13.	Know why things done
16	-- ^c	57.	Speak to surgeon right after surgery
17	-- ^c	48.	Inform: to help patient <u>emotionally</u> in hospital
18	15	40.	Told about discharge plans
19	9	42.	Receive information once a day
20	-- ^c	47.	Inform: to help patient <u>physically</u> in hospital
21	-- ^c	58.	Nurse to answer questions after talk to surgeon
22	20	2.	Explain what to expect before seeing patient
23	22	21.	Feel accepted by staff
24	33	8.	Good food available
25	25	33.	Bathroom nearby
26	36	37.	Visiting hours on time
27	-- ^c	53.	Get rest for myself
28	-- ^c	54.	Follow eating habits
29	23	15.	Know type of staff caring for patient
30	19	11.	Know which staff could give what information
31	27	39.	Help with patient's physical care
32	26	6.	Visiting hours changed

Table G-1 (continued)

Rank of Item in this Study ^a	Rank of Item in Leske Study ^b	Item #	Need
33	29	12.	Friends nearby for support
34	-- ^c	62.	Find ways to deal with stress
35	16	46.	Waiting room nearby
36	42	7.	Talk about own feelings
37	-- ^c	55.	Ensure breathing easy
38	-- ^c	52.	Attend to routine bowel/bladder patterns
39	35	32.	Told re: others to help with problems
40	17	4.	Specific person to call
41	-- ^c	51.	Attend to own physical problems
42	-- ^c	59.	Take time for exercise
43	-- ^c	30.	Talk to <u>a</u> nurse every day
44	45	31.	Feel it is alright to cry
45	18	23.	Have telephone nearby
46	24	28.	Assured alright to leave hospital
47	21	25.	Talk about patient's possible death
48	30	9.	Directions: what to do at the bedside
49	28	10.	Visit at any time
50	14	3.	Talk to doctor every day
51	34	20.	Comfortable furniture
52	-- ^c	61.	Talk re: impact of patient's illness on me
53	41	35.	Told re: others to help with family problems
54	39	18.	Have place to be alone while in the hospital
55	38	29.	Talk to <u>same</u> nurse everyday
56	31	24.	Have pastor visit
57	44	34.	Be alone at any time
58	37	22.	Someone to help with financial problems
59	32	27.	Someone concerned about my health
60	40	38.	Told re: chaplain services
61	-- ^c	60.	Physical assistance to get to room
62	43	26.	Person with me when visiting

Note. ^aRank order out of a possible 62. ^bRank order out of a possible 45.

^cItems not included in Leske study.

Appendix H

Differences in Importance by Gender and Relationship to Patient: t-Tests

Table H-1: Differences in Importance by Gender and Relationship to Patient: t-Tests

Category of Mean Score	Differences	
	Subject Gender Male vs Female	Relationship to Patient Spouse vs Non-Spouse
Total Scale	$t=-1.49, p=.14$	$t=1.48, p=.14$
Subscales		
Safety/Security	$t=-1.72, p=.09$	$t=1.22, p=.23$
Love, Belongingness, Dependence	$t=-1.69, p=.09$	$t=1.43, p=.16$
Respect of Self	$t=-1.12, p=.27$	$t=.89, p=.37$
Mastery	$t=-.94, p=.35$	$t=.69, p=.49$
Food/Fluid	$t=-.77, p=.44$	$t=1.24, p=.22$
Stimulation of the Senses	$t=-.35, p=.73$	$t=.90, p=.37$
Production/Utilization of Energy	$t=-.82, p=.41$	$t=2.12, p=.04^*$
Collection/Removal of Wastes	$t=-.36, p=.72$	$t=2.07, p=.04^*$
Intake of Oxygen	$t=-.85, p=.40$	$t=.80, p=.43$

Note. *Statistically significant at .05 level of significance.